

1/65

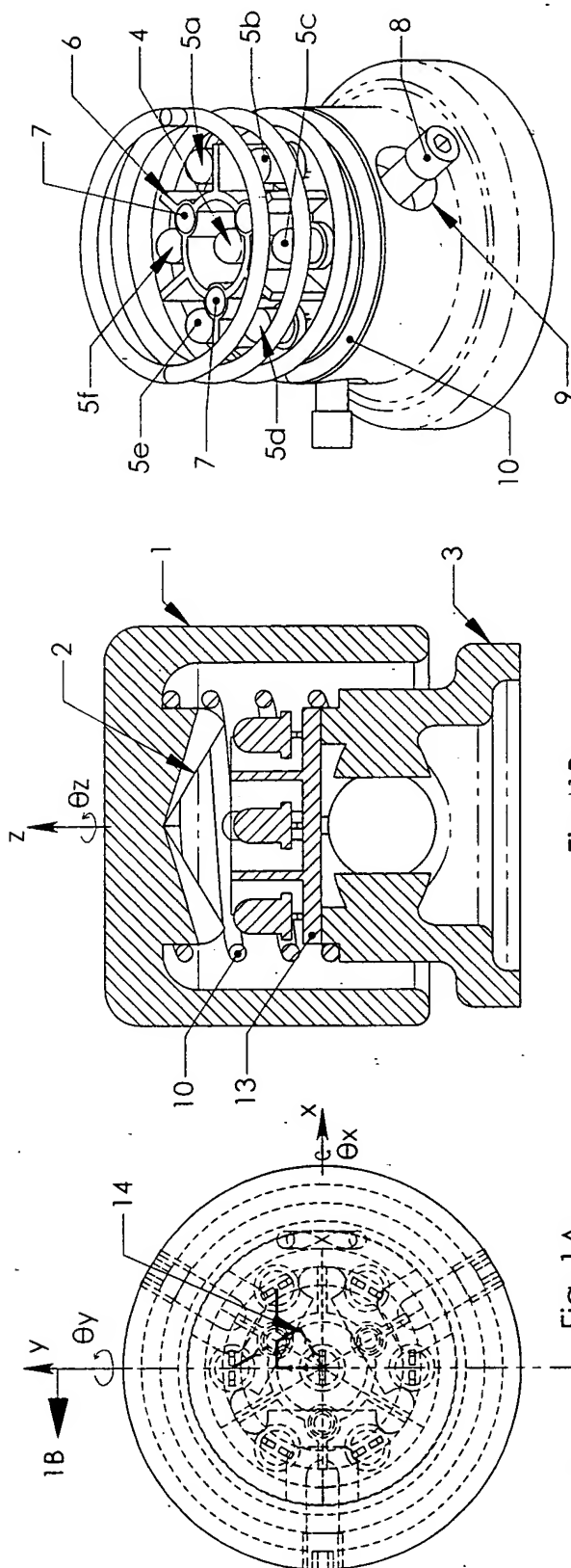


Fig. 1C

Fig. 1B

Fig. 1A

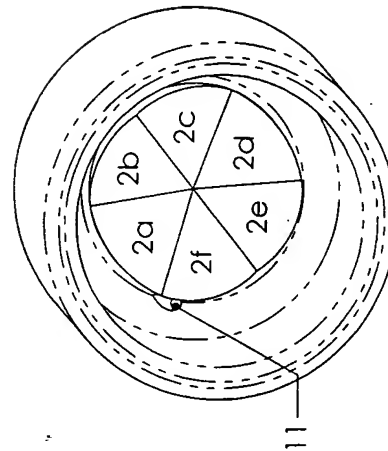


Fig. 2

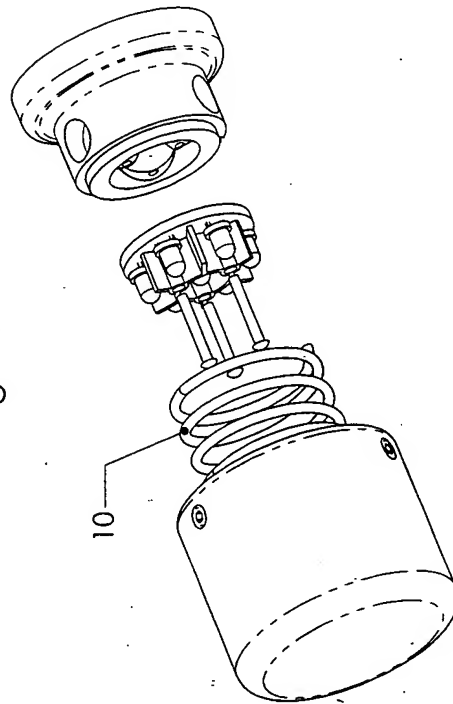


Fig. 1E

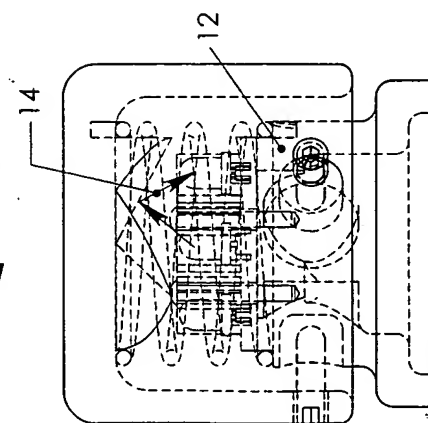


Fig. 1D

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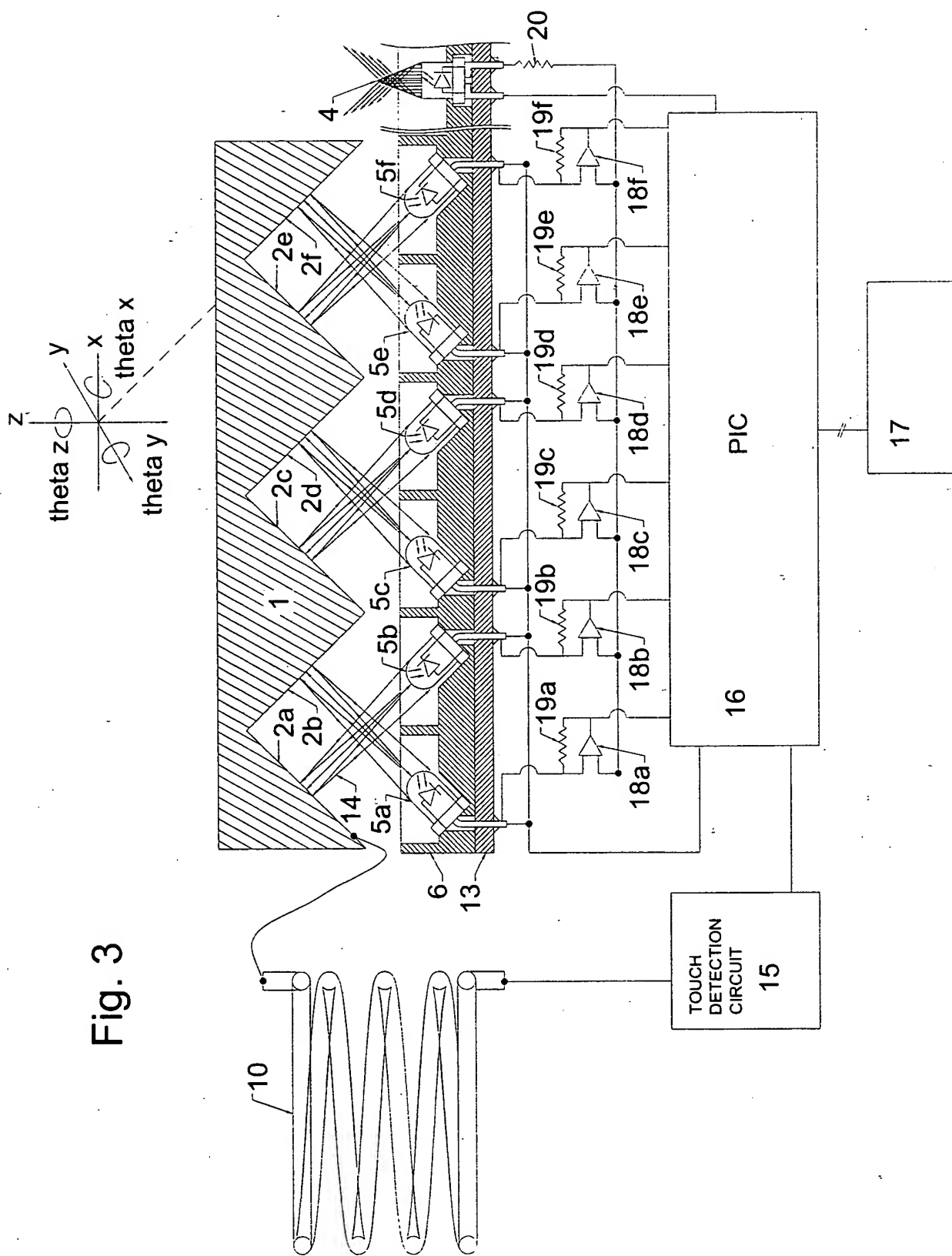
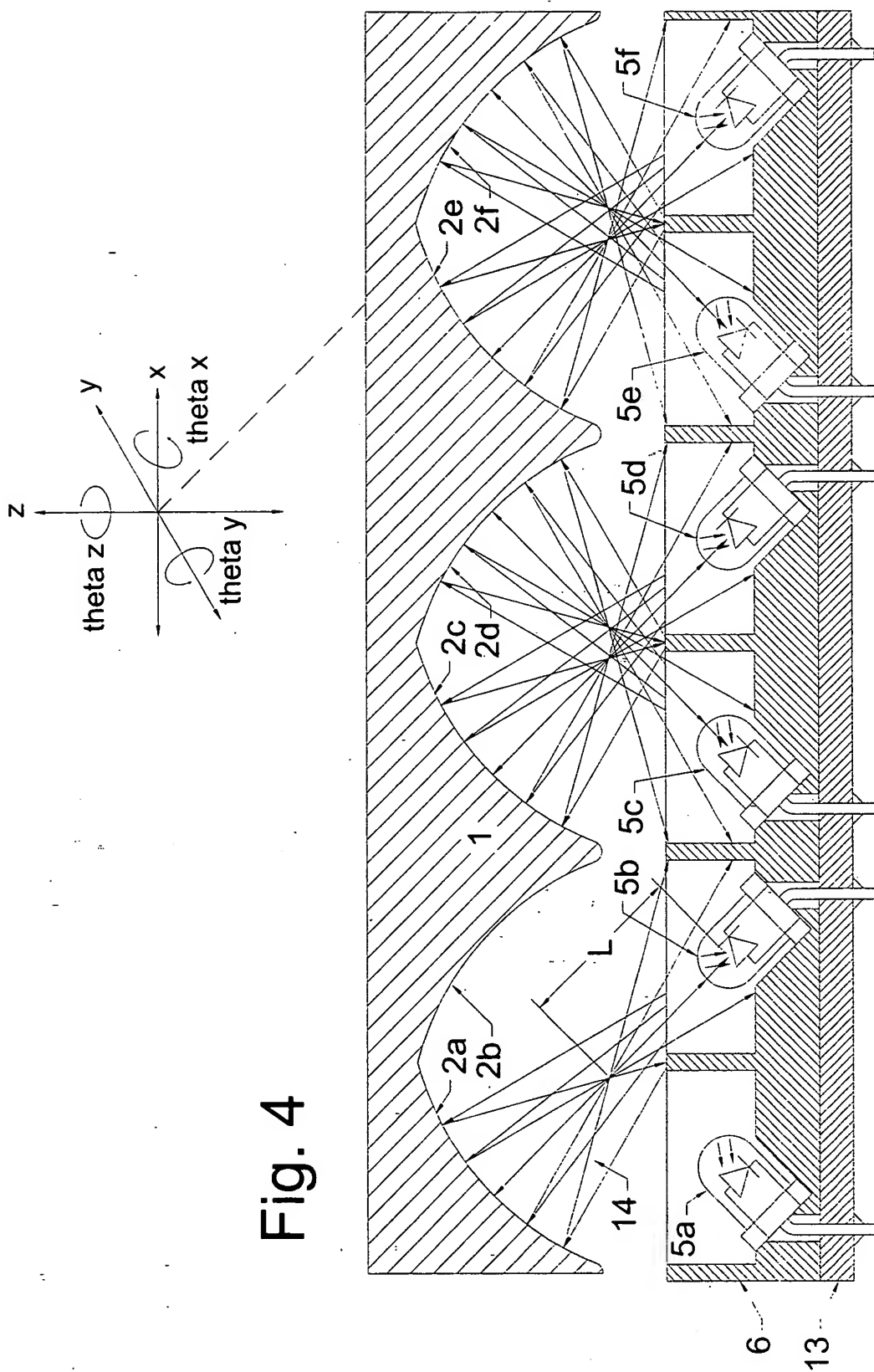
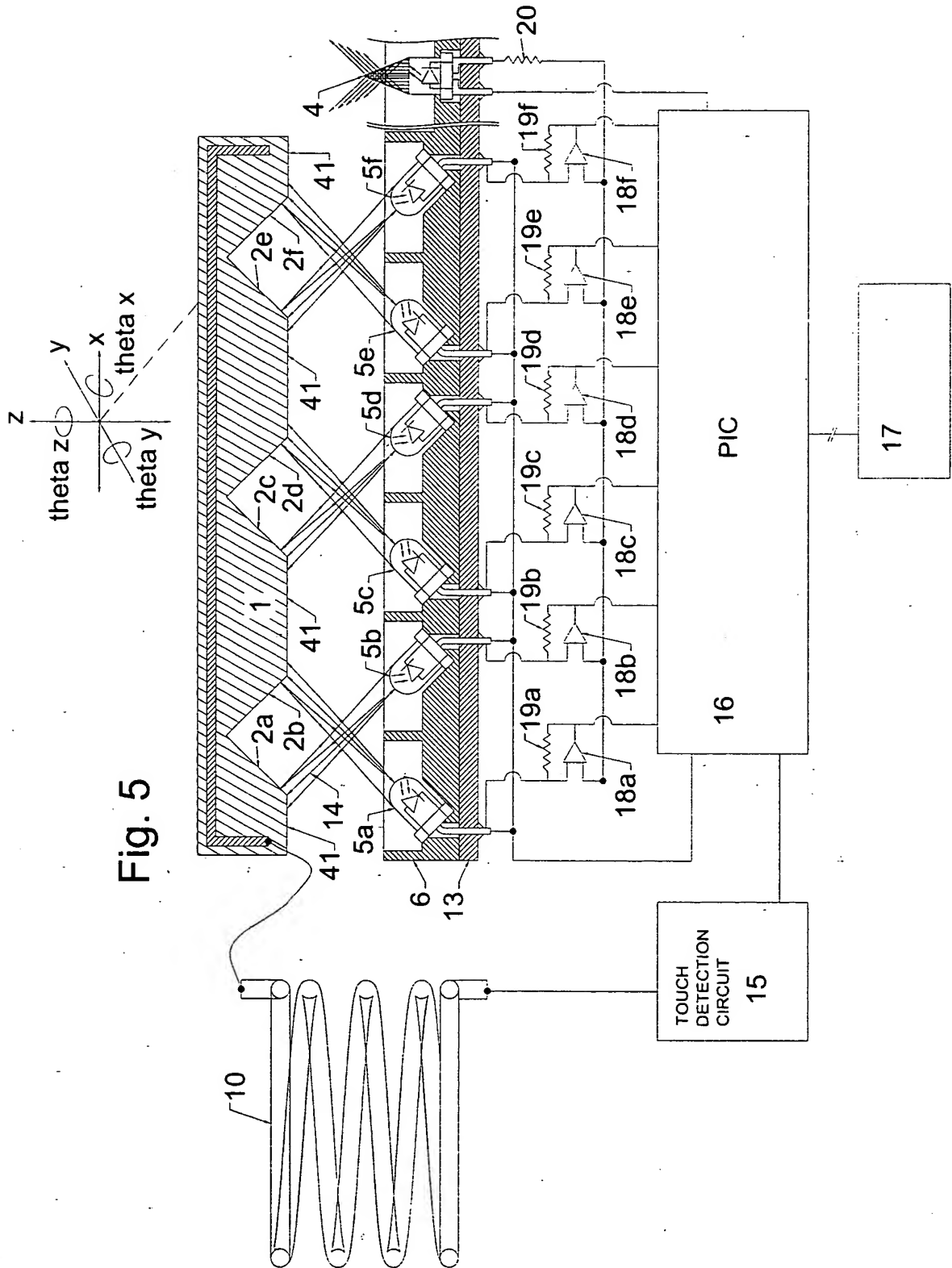
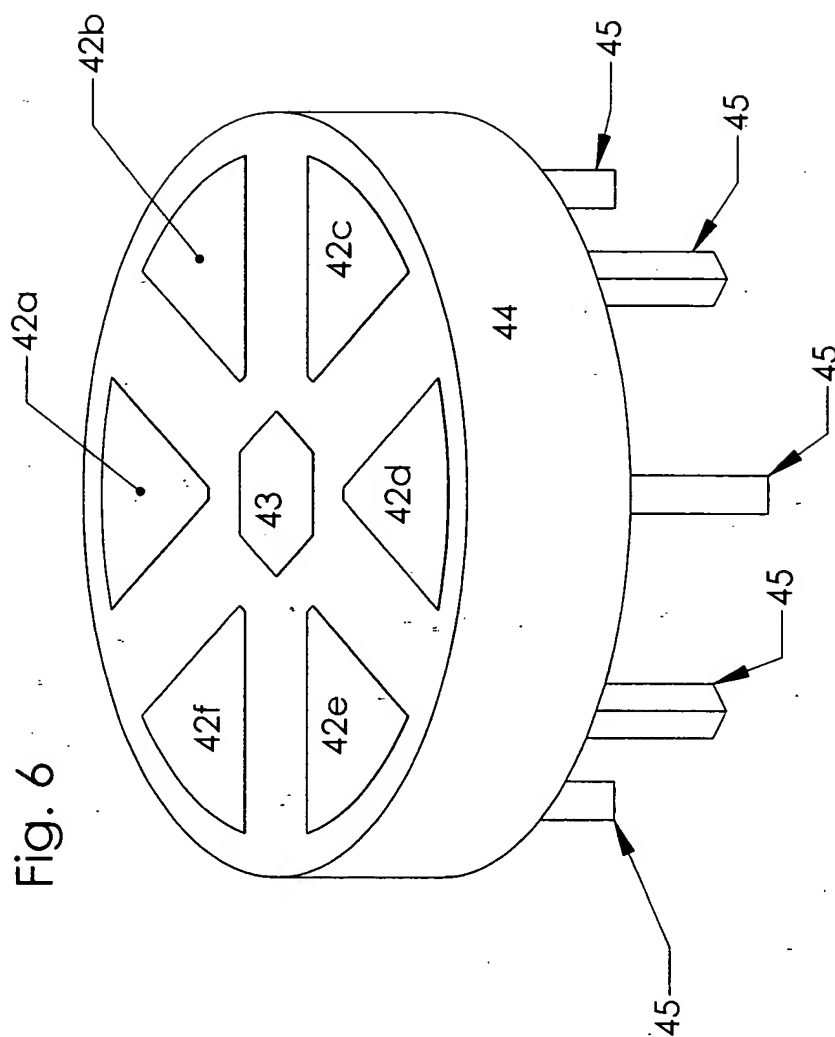


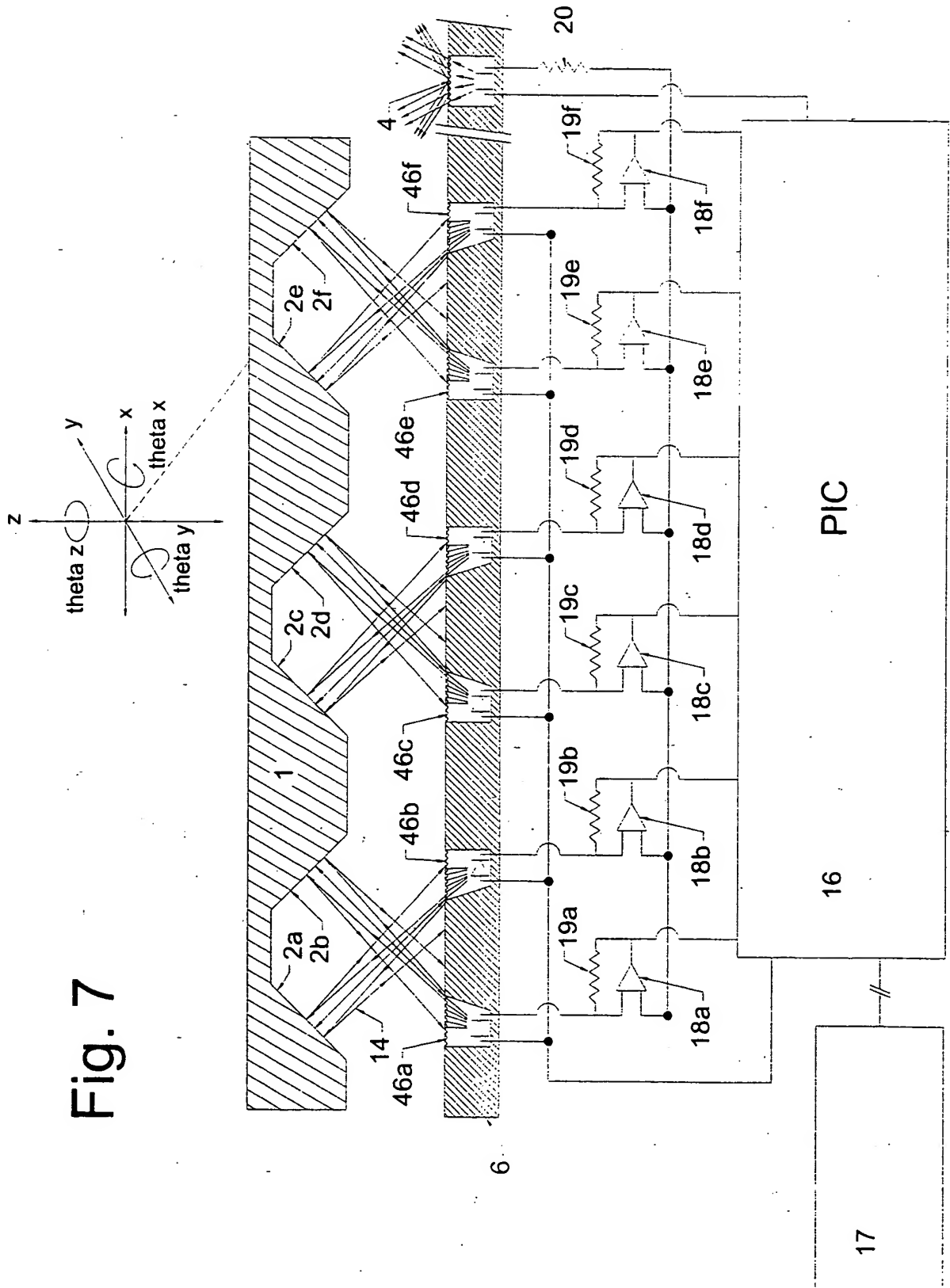
Fig. 4







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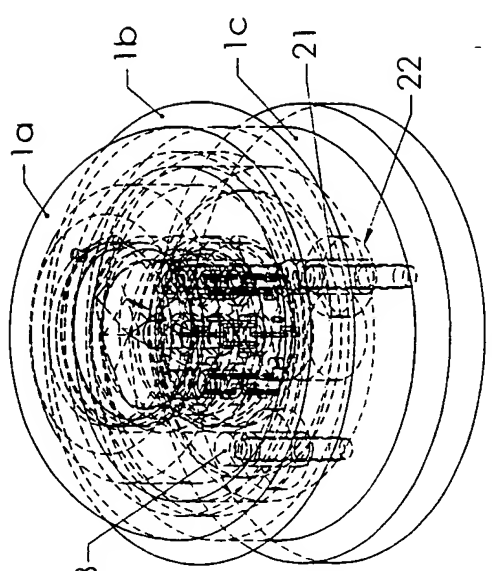


Fig. 8C

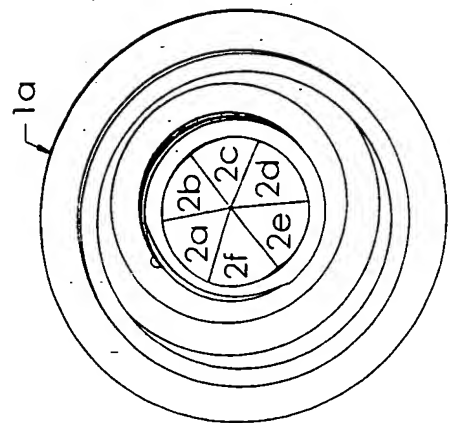


Fig. 9

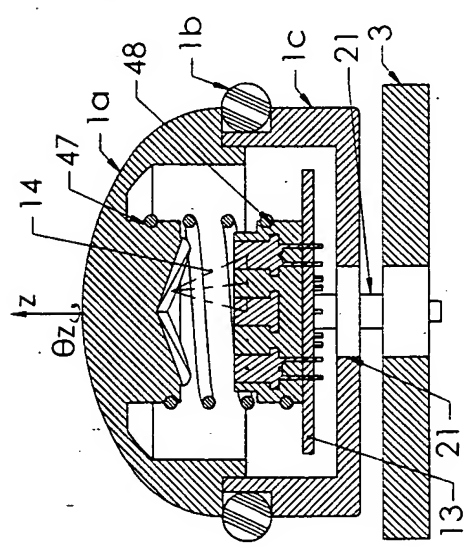


Fig. 8B

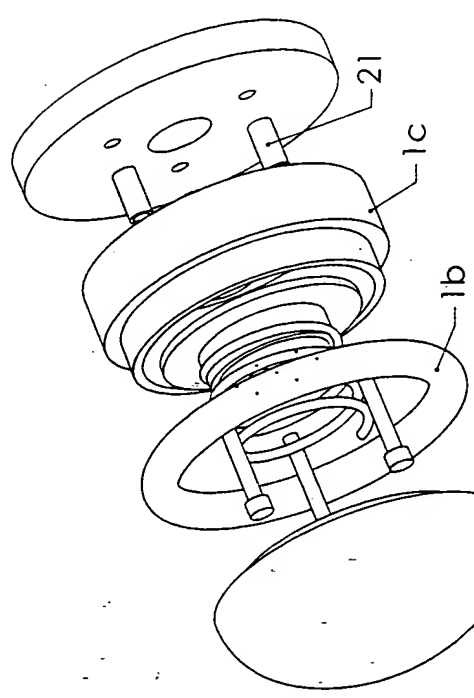


Fig. 8E

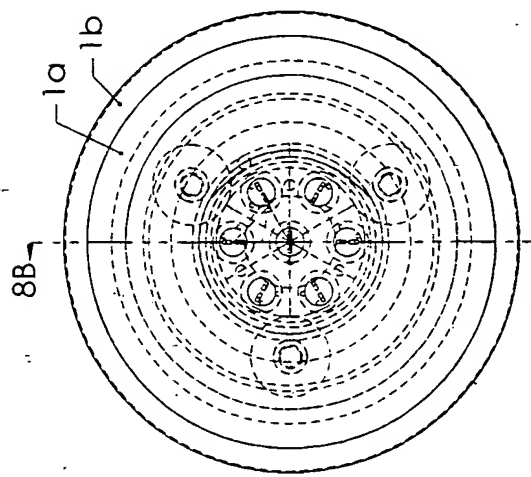


Fig. 8A

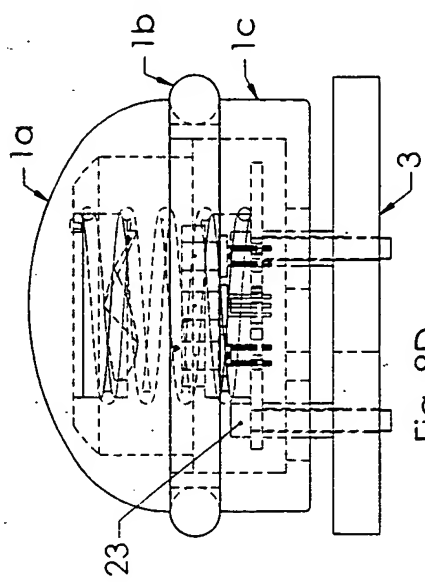


Fig. 8D

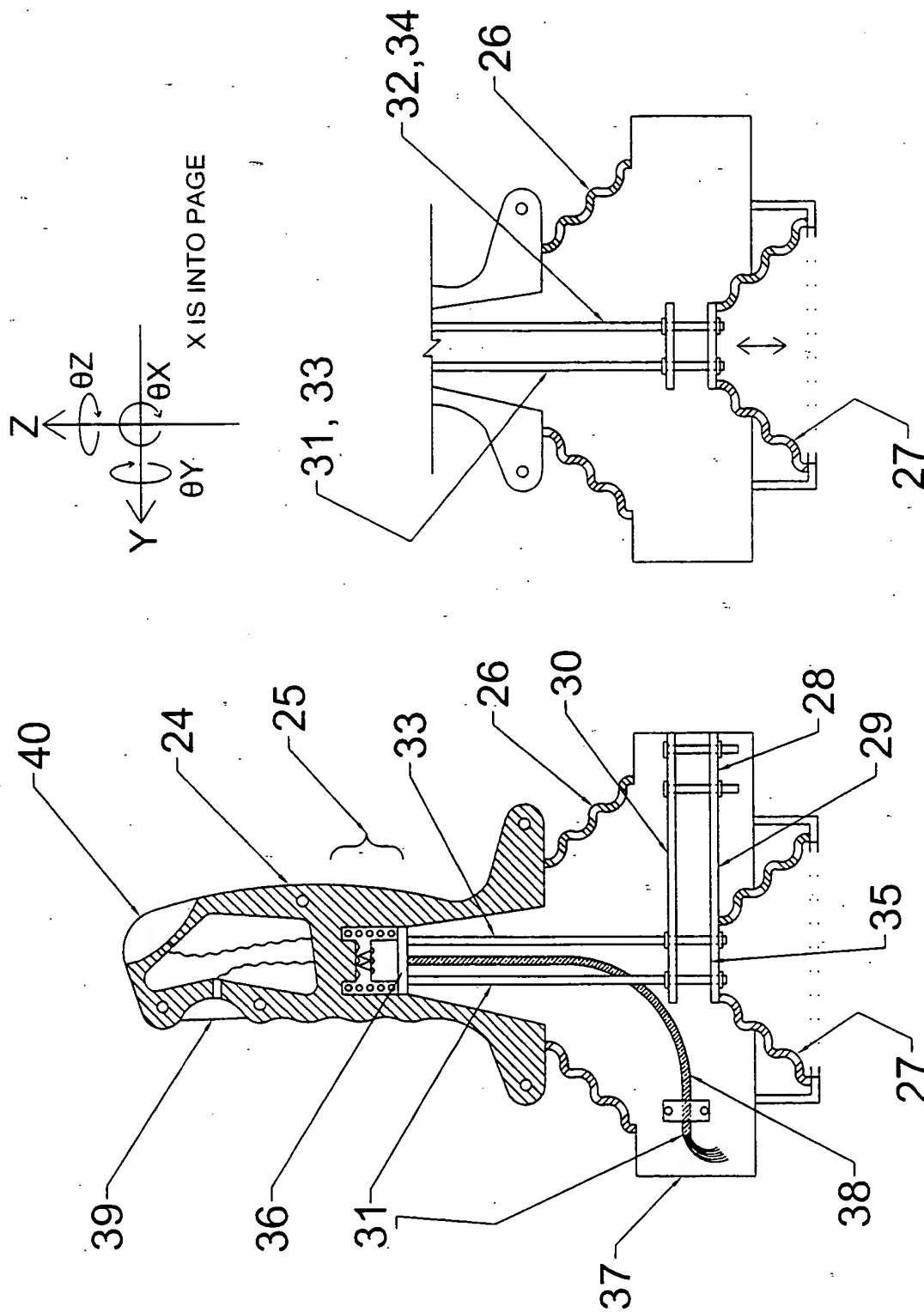
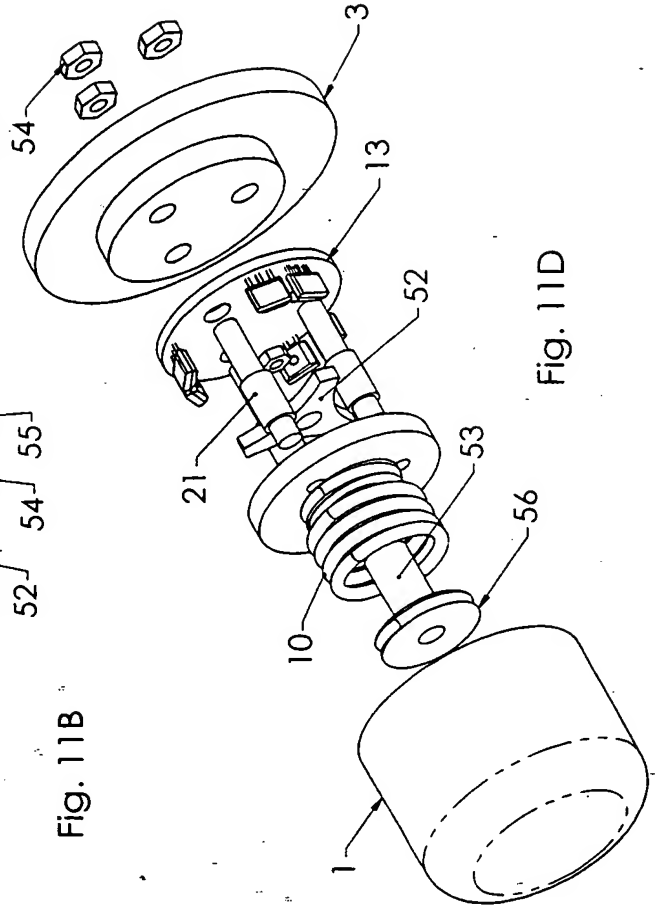
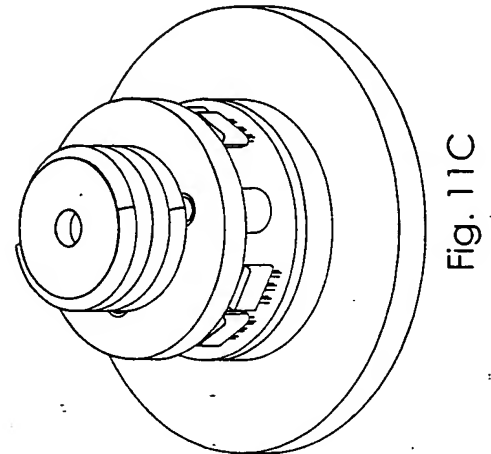
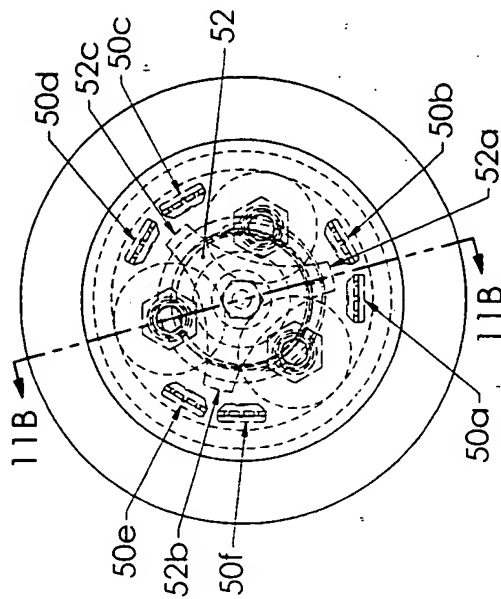
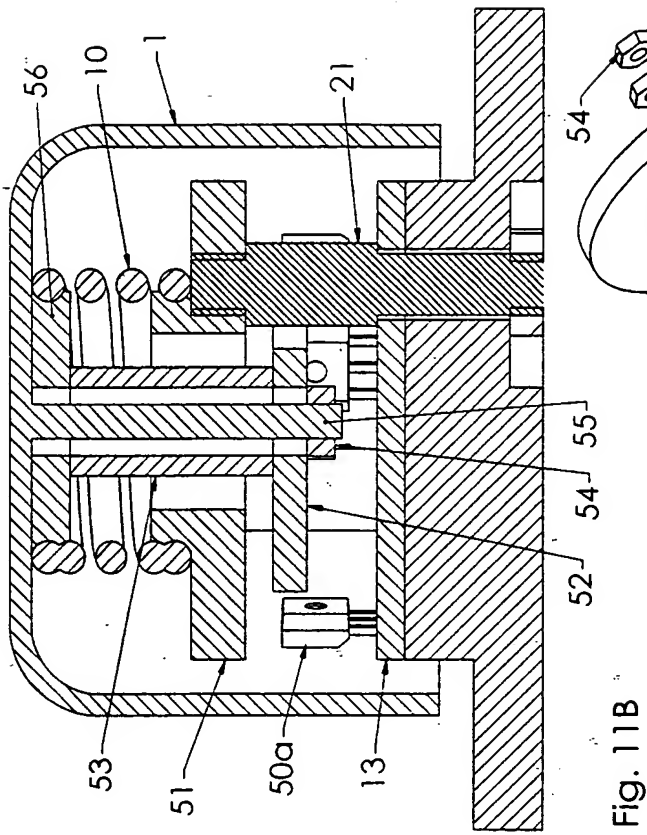


Fig. 10A

Fig. 10B



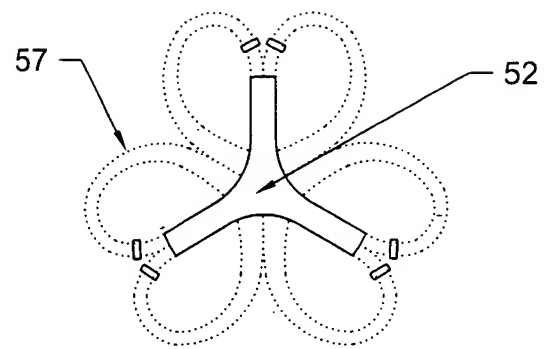


Fig. 12

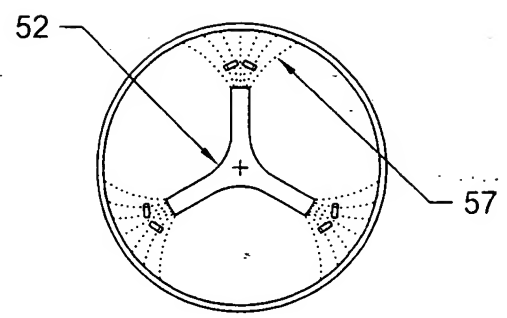


Fig. 13

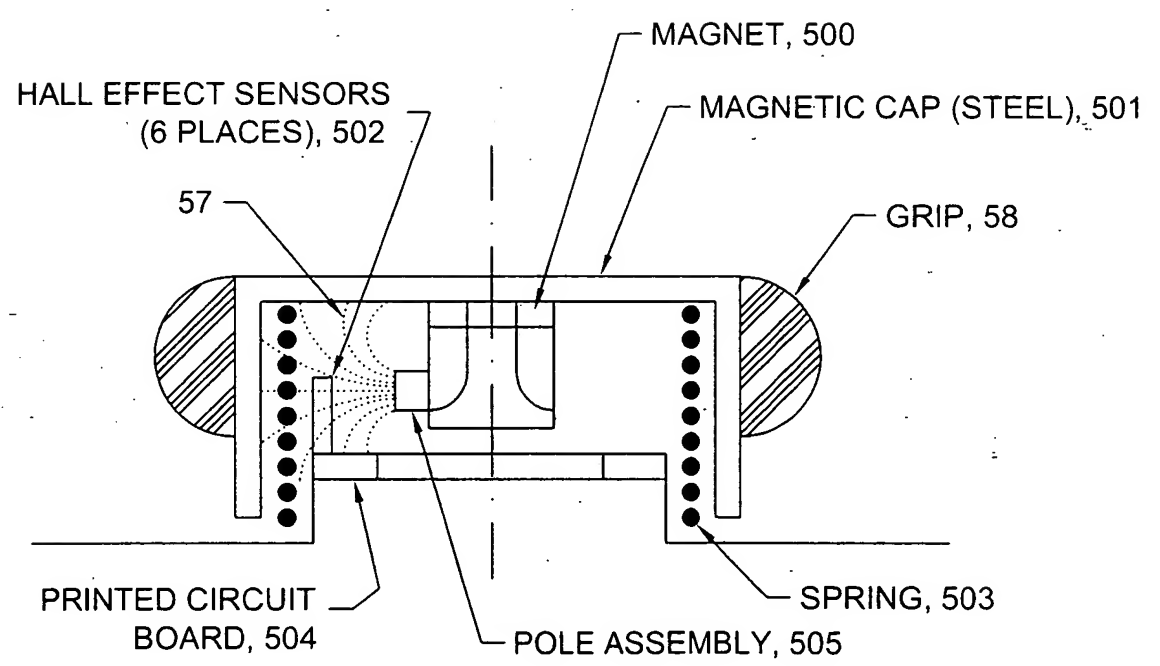


Fig. 13

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PRINTED CIRCUIT BOARD DETAIL

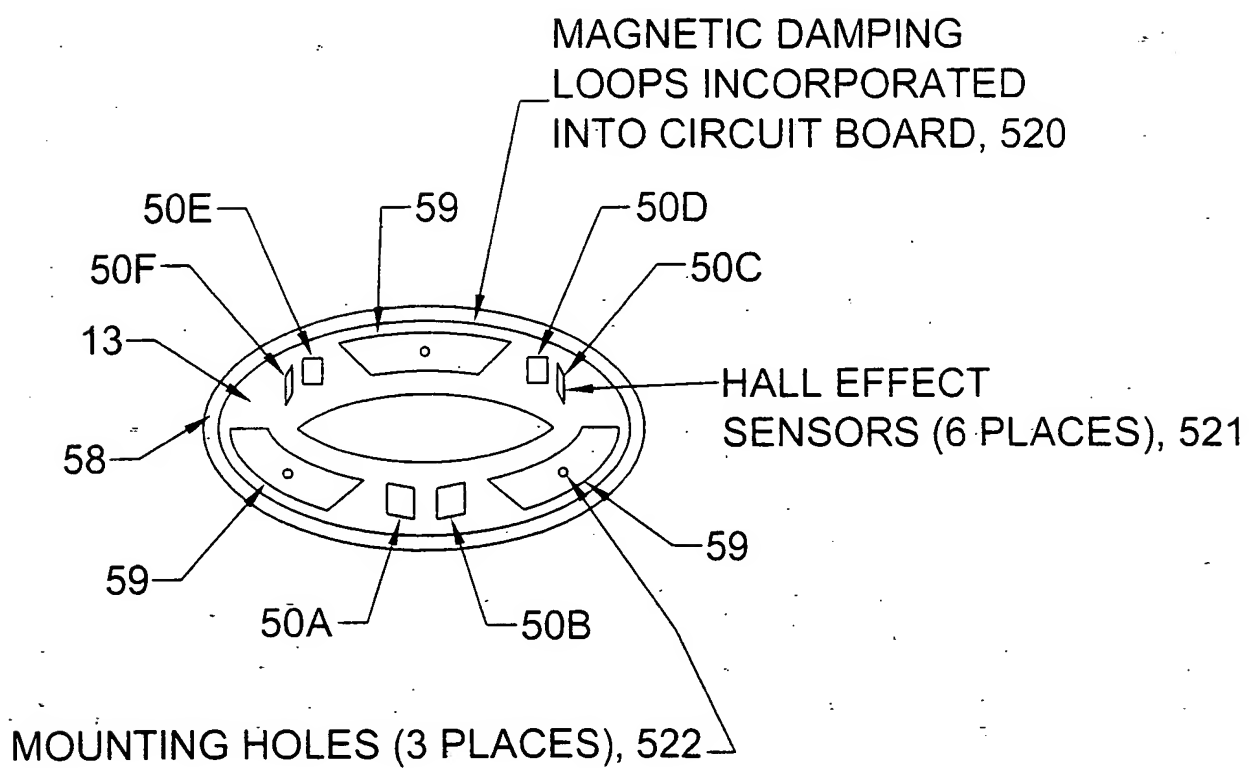


Fig. 14

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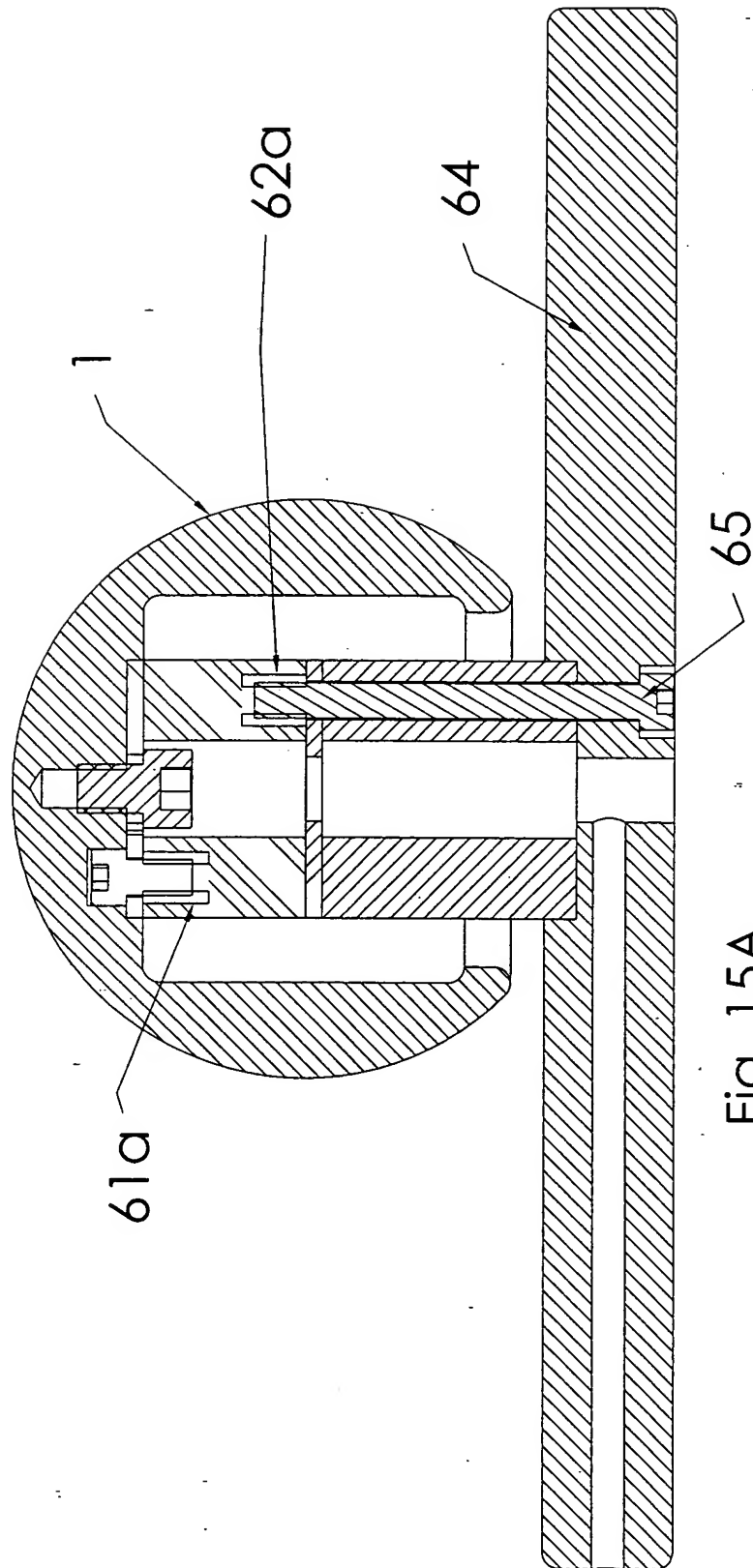
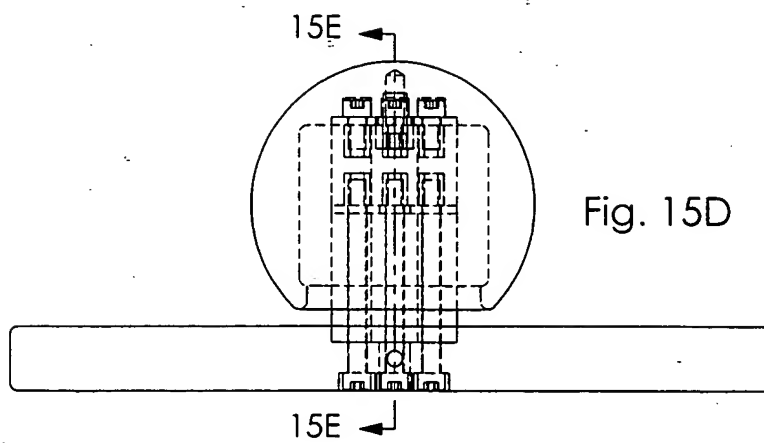
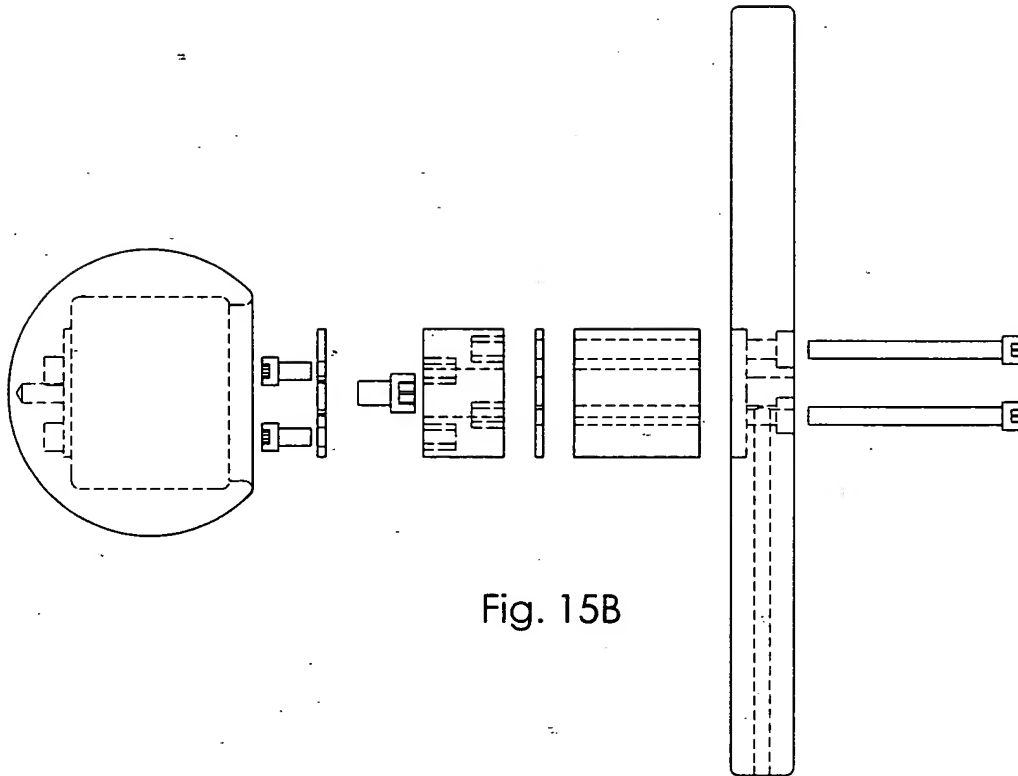
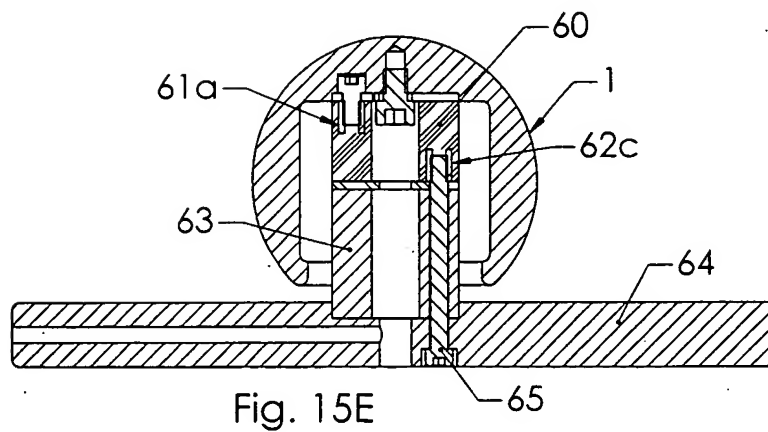
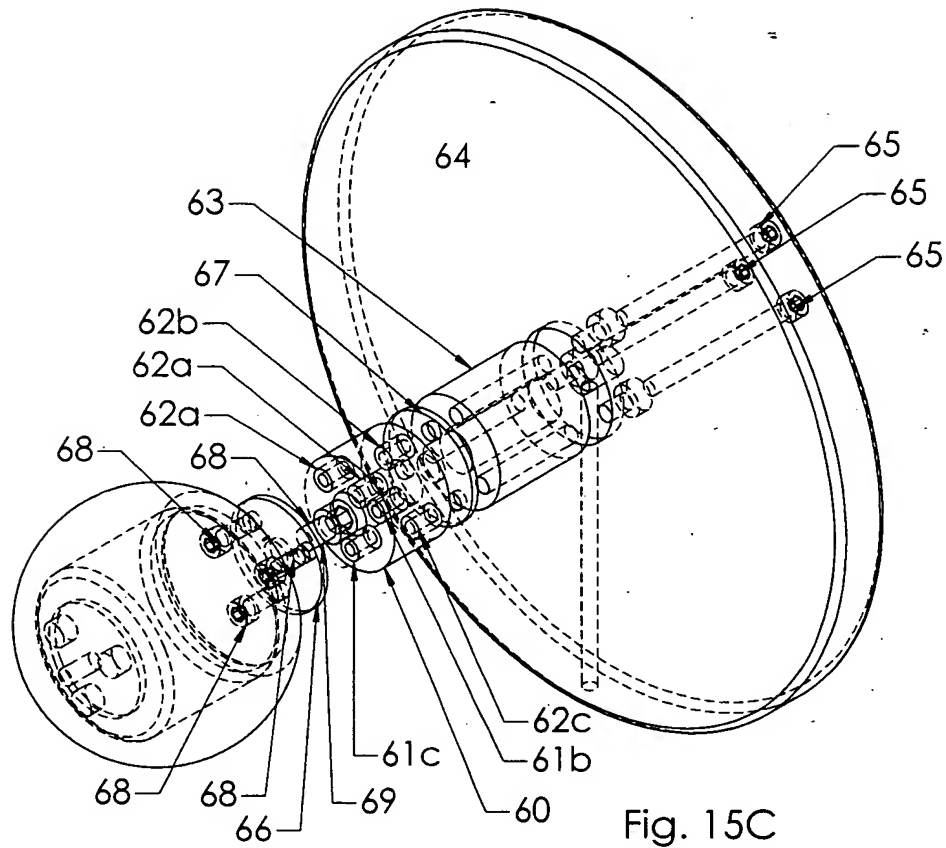


Fig. 15A

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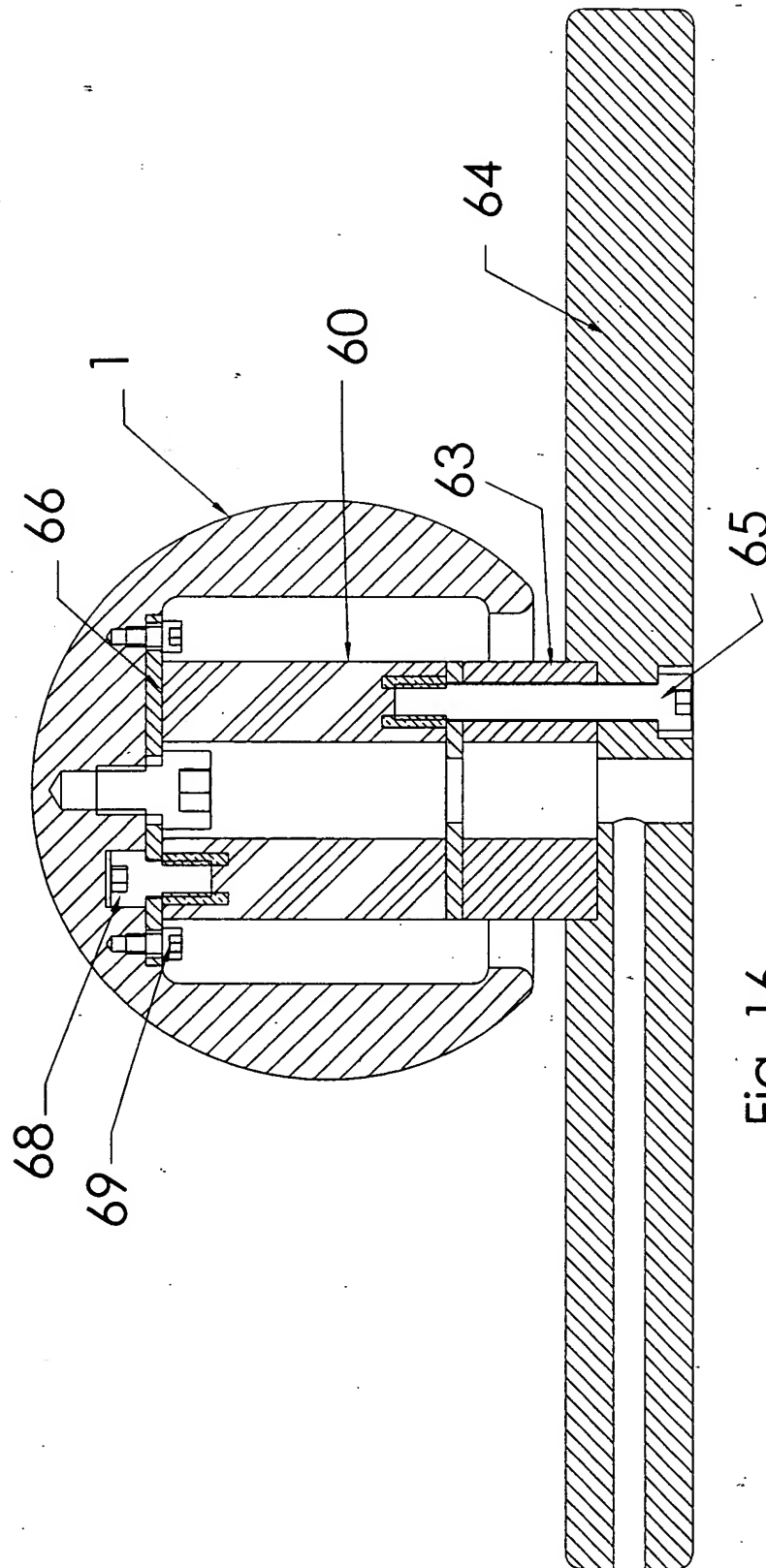


Fig. 16

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CIRCUIT DIAGRAM FOR RUBBER PLUG

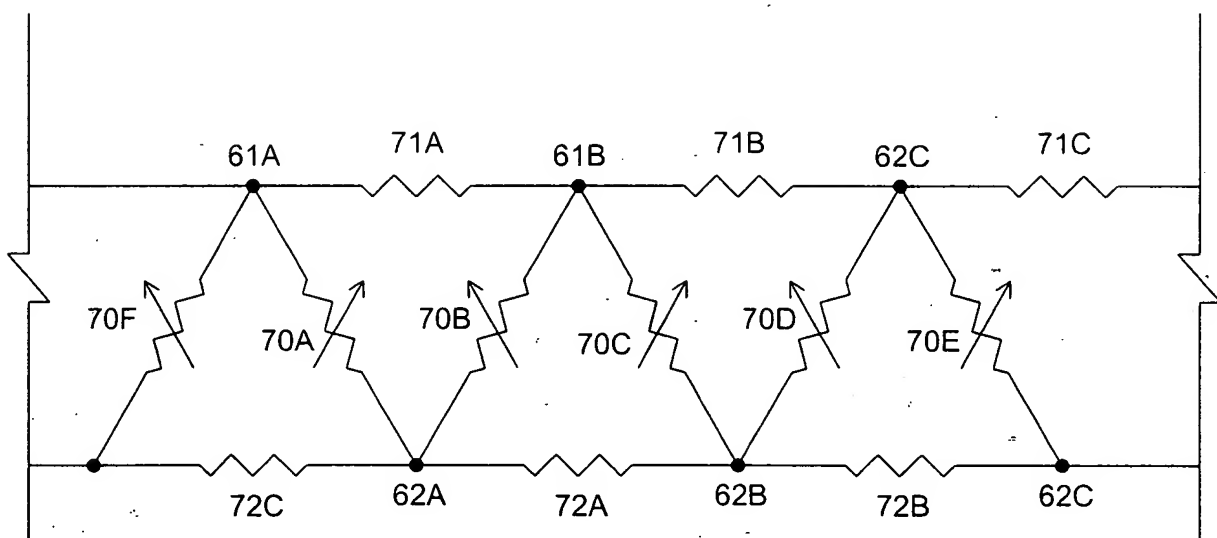


Fig. 17

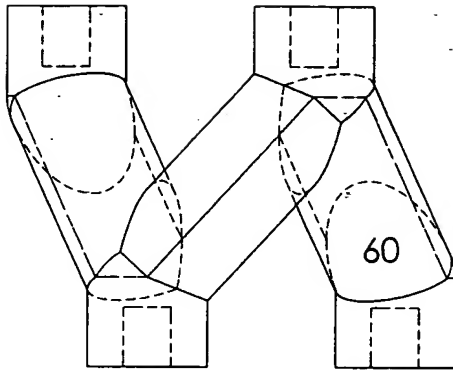


Fig. 18A

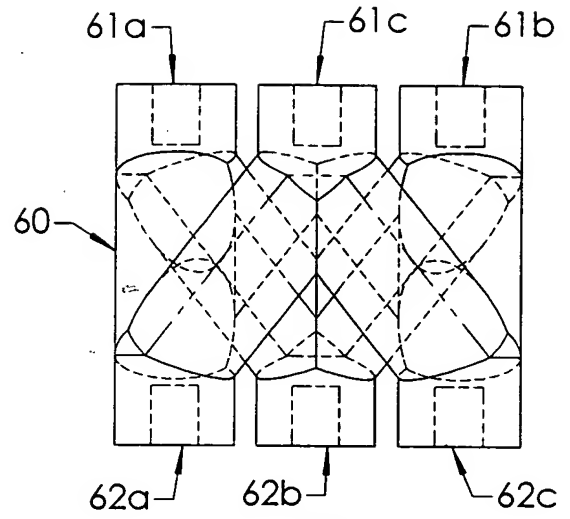


Fig. 18B

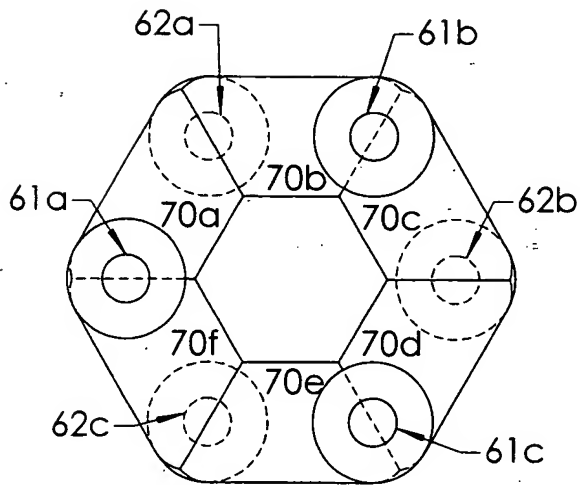


Fig. 18C

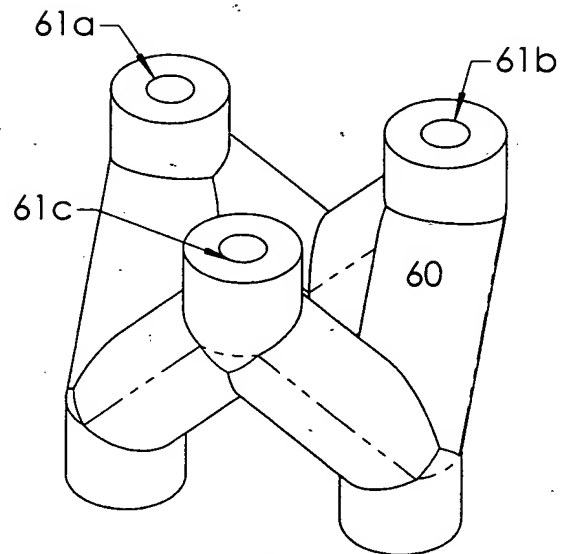


Fig. 18D

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CIRCUIT DIAGRAM FOR "SPIDER"

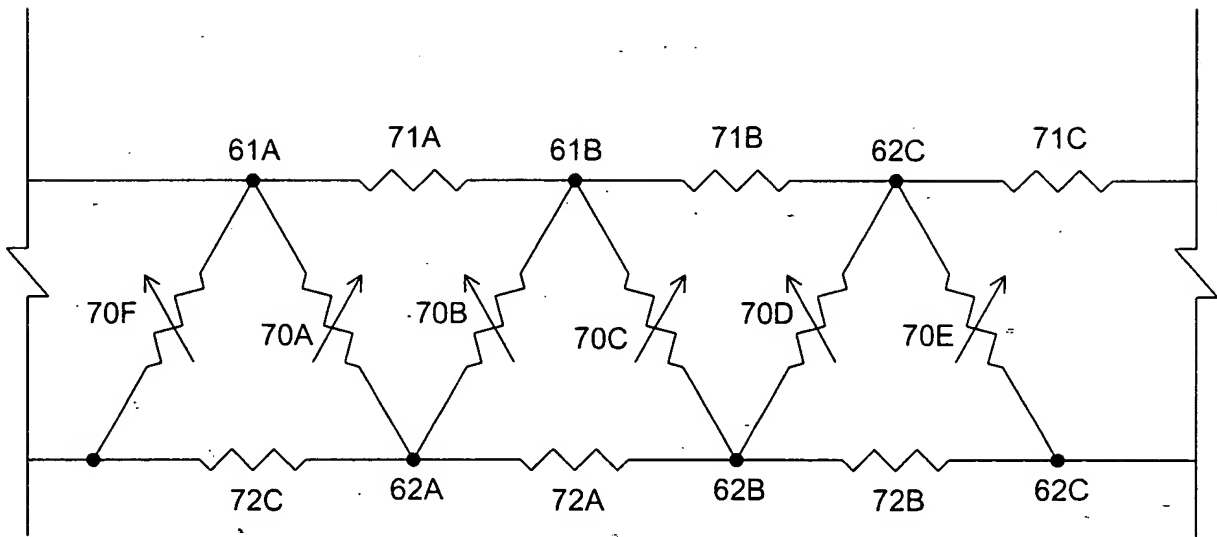


Fig. 18E

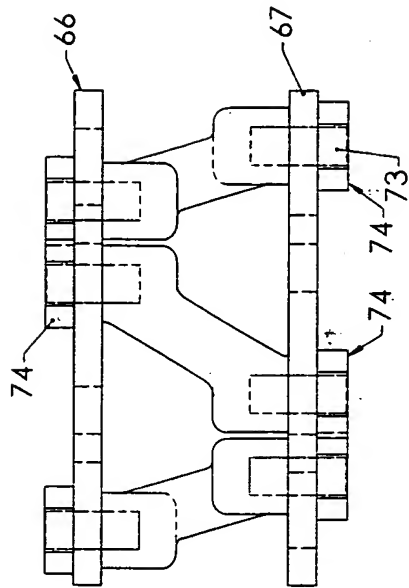


Fig. 19B

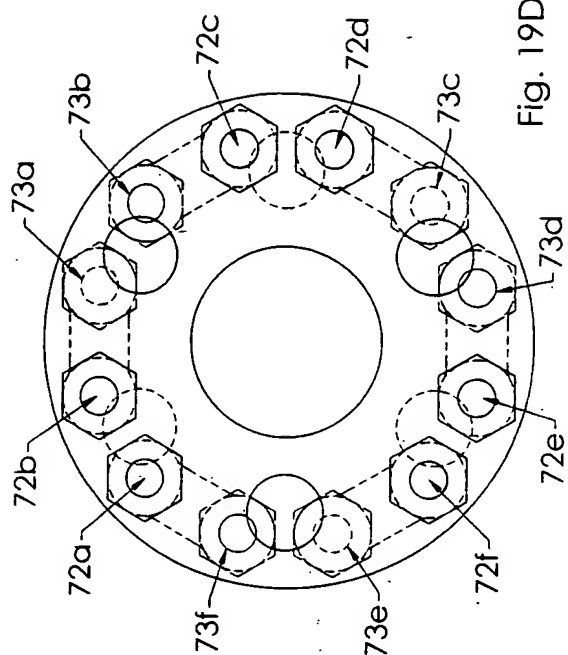


Fig. 19D

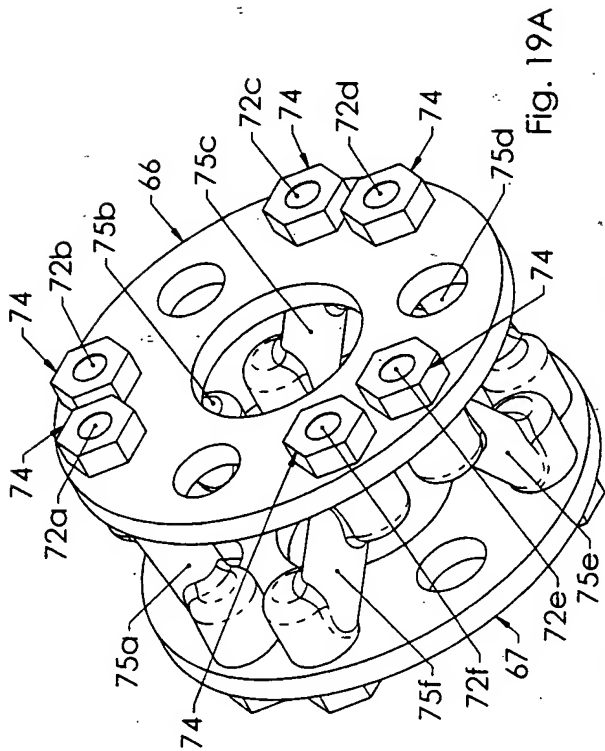


Fig. 19A

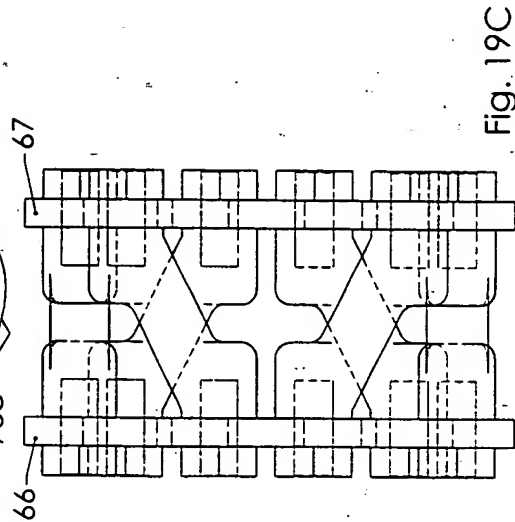


Fig. 19C

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CIRCUIT DIAGRAM FOR INDEPENDANT CIRCUIT ELEMENTS

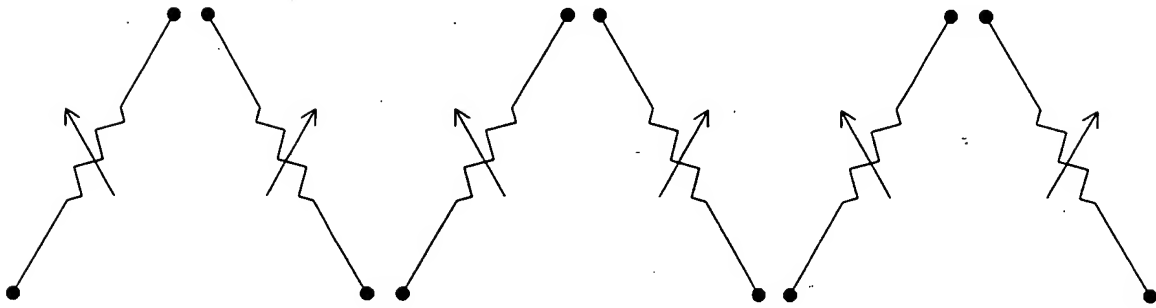


Fig. 19E

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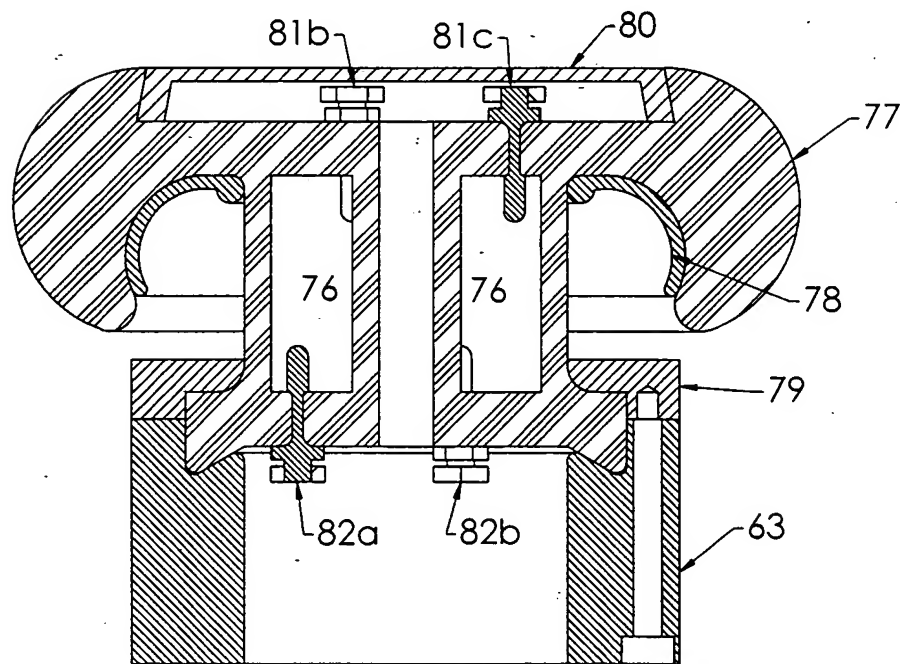
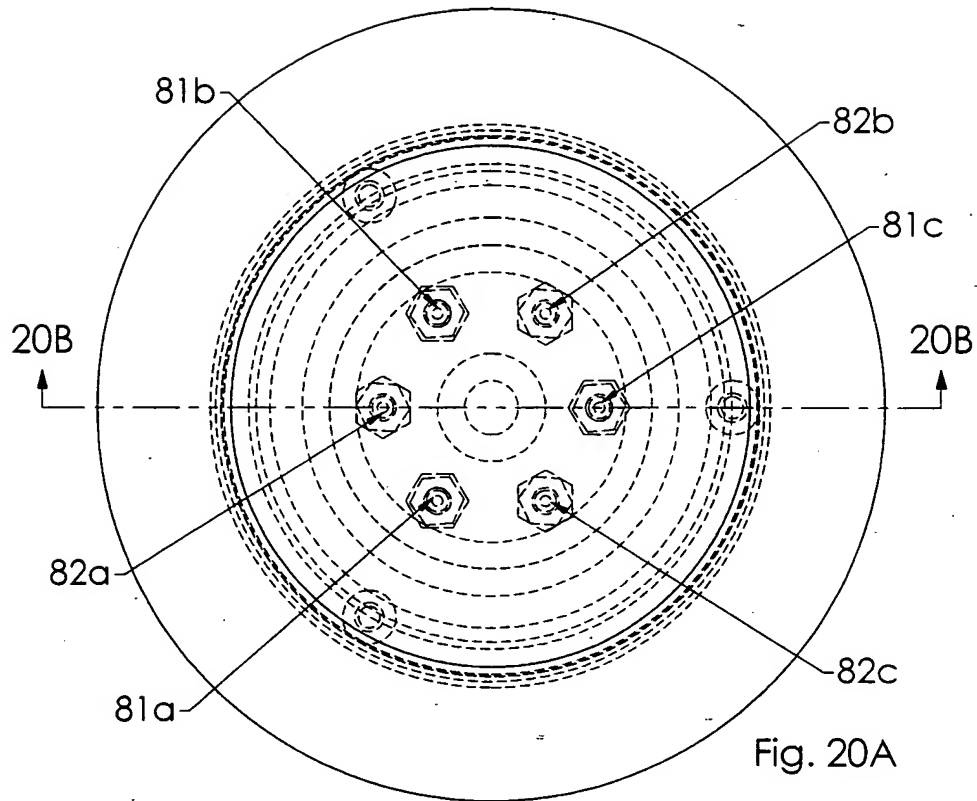


Fig. 20B

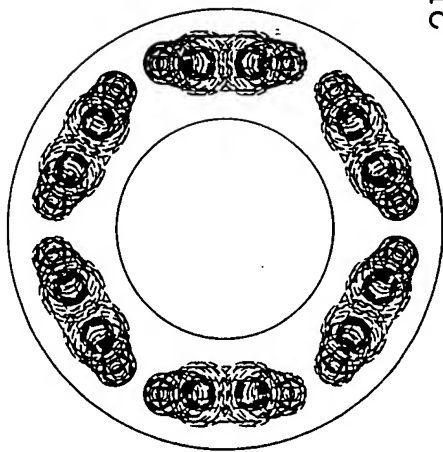


Fig. 21A

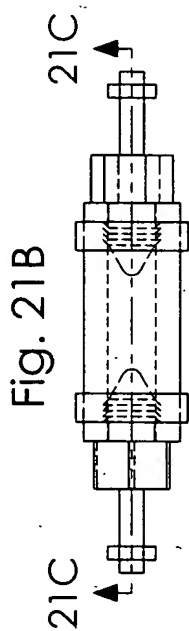


Fig. 21B

21C

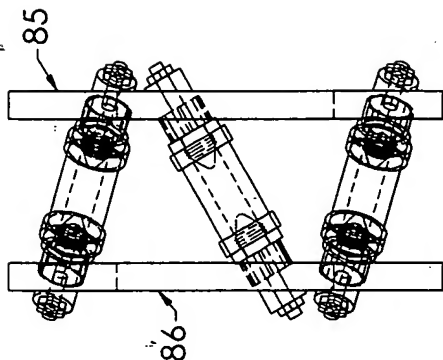


Fig. 21E

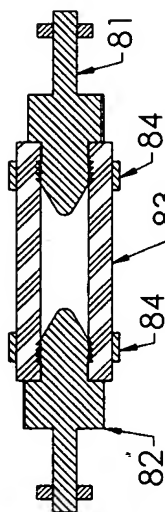


Fig. 21C

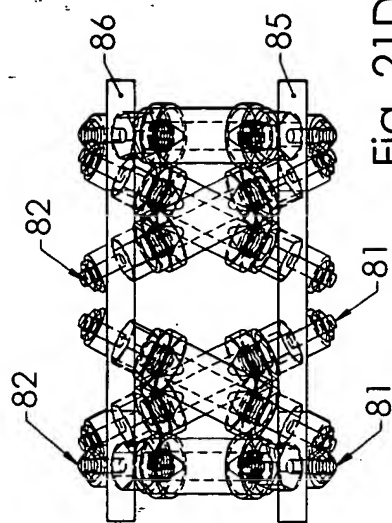


Fig. 21D

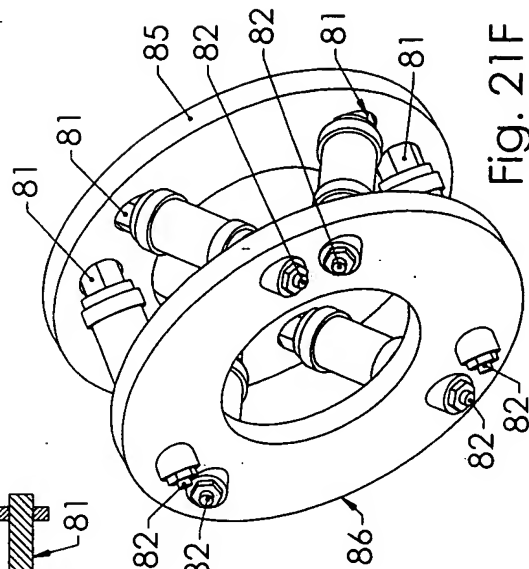


Fig. 21F

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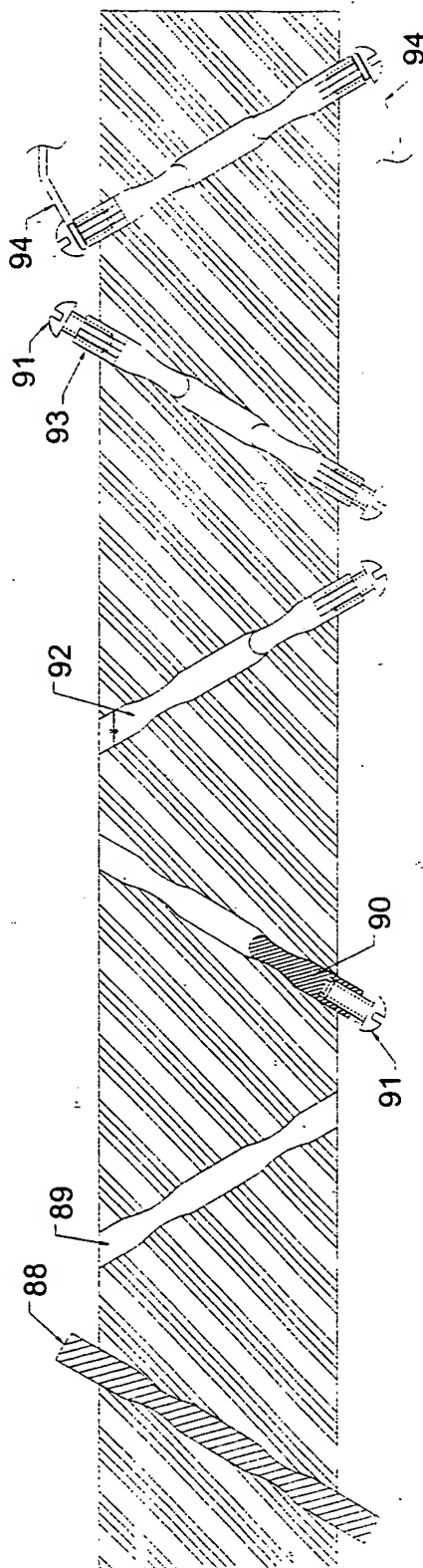


Fig. 22

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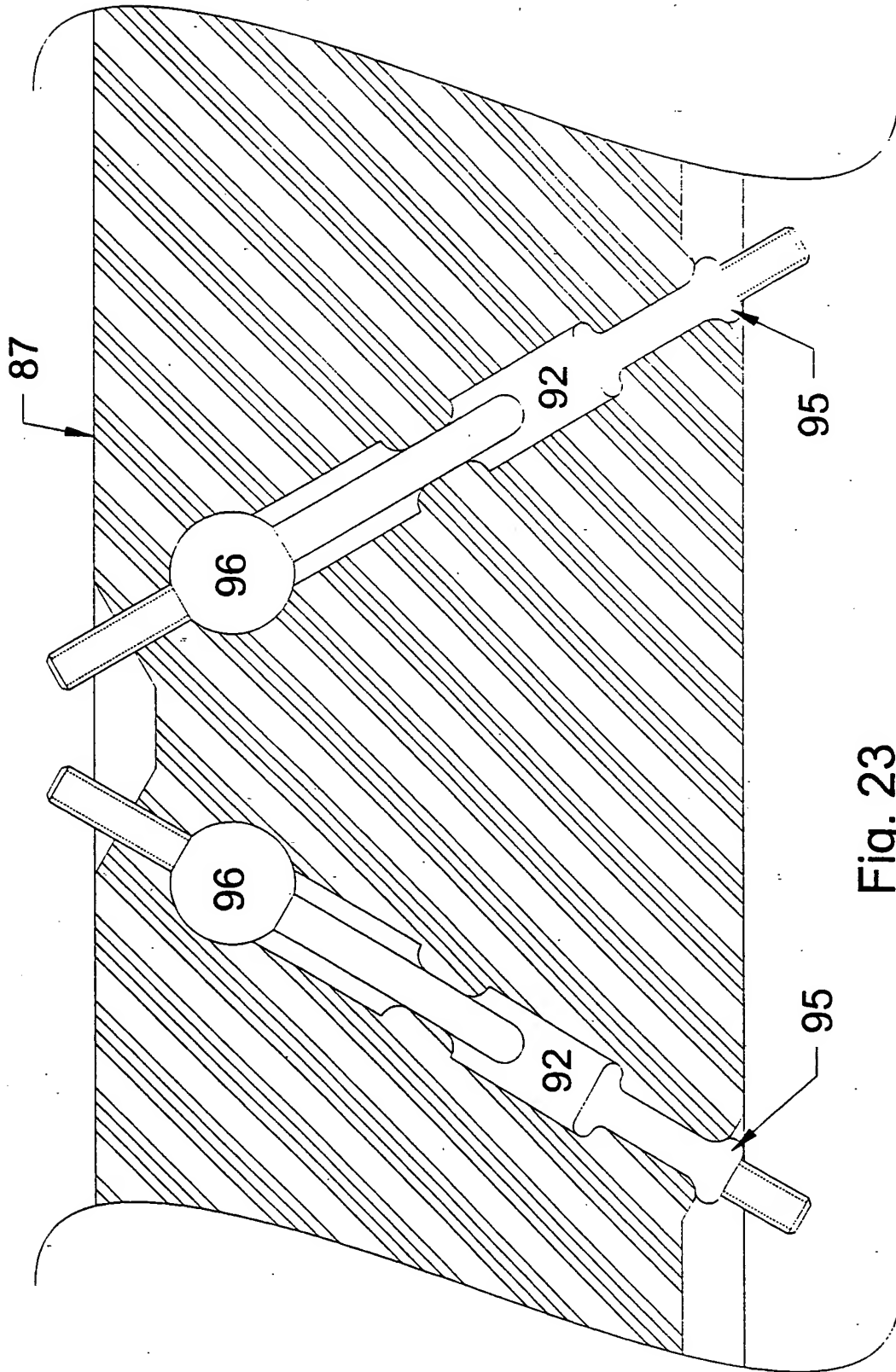


Fig. 23

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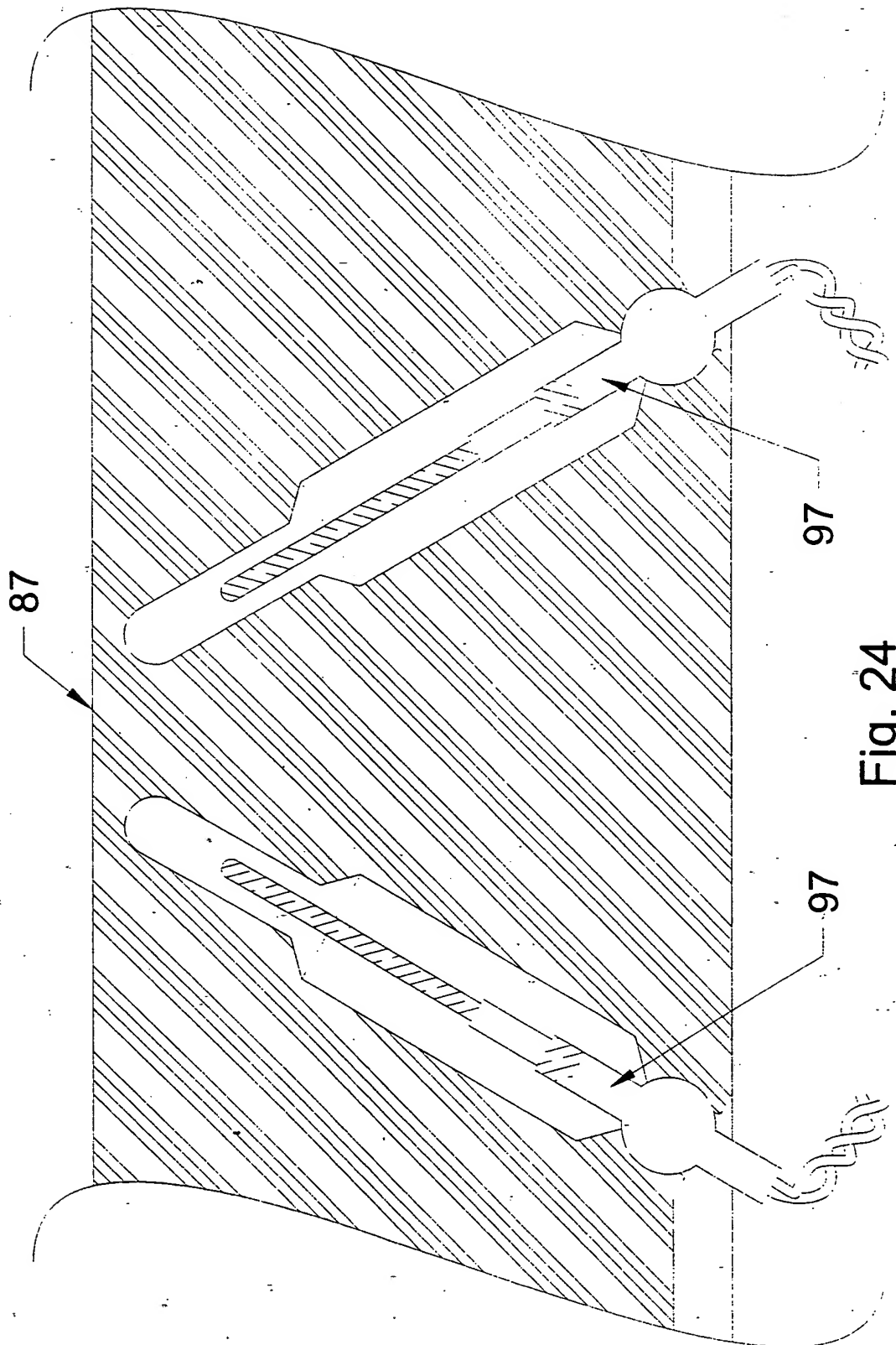


Fig. 24

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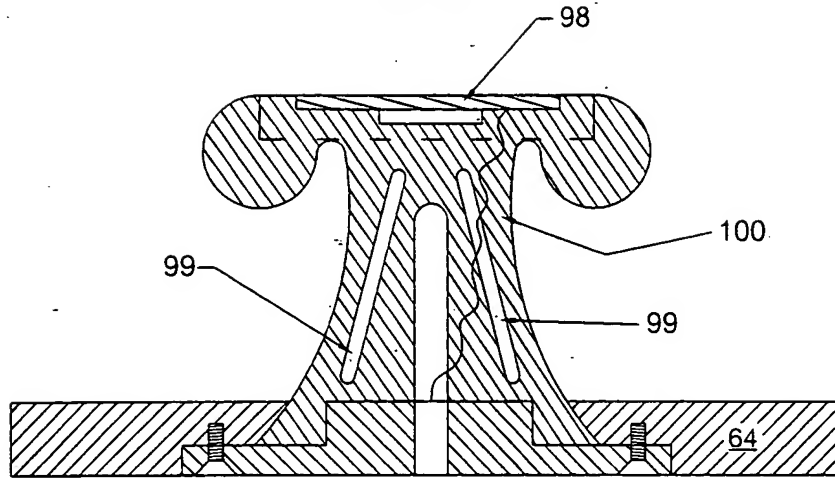


Fig. 25A

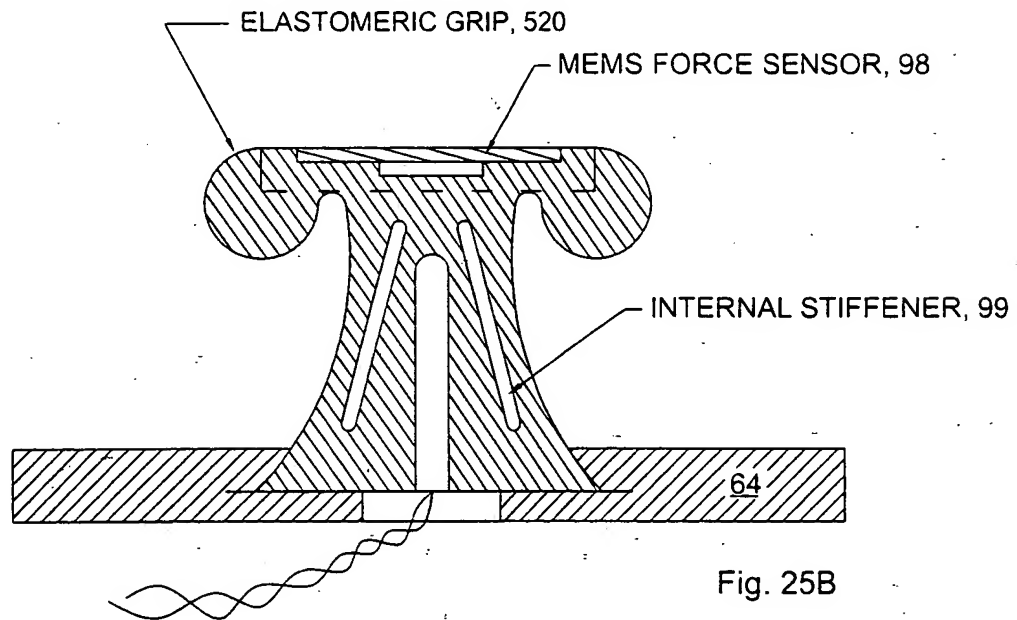


Fig. 25B

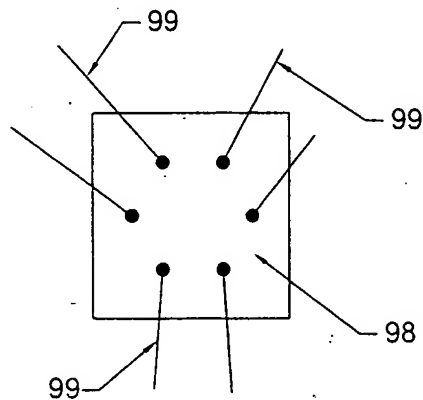


Fig. 25C

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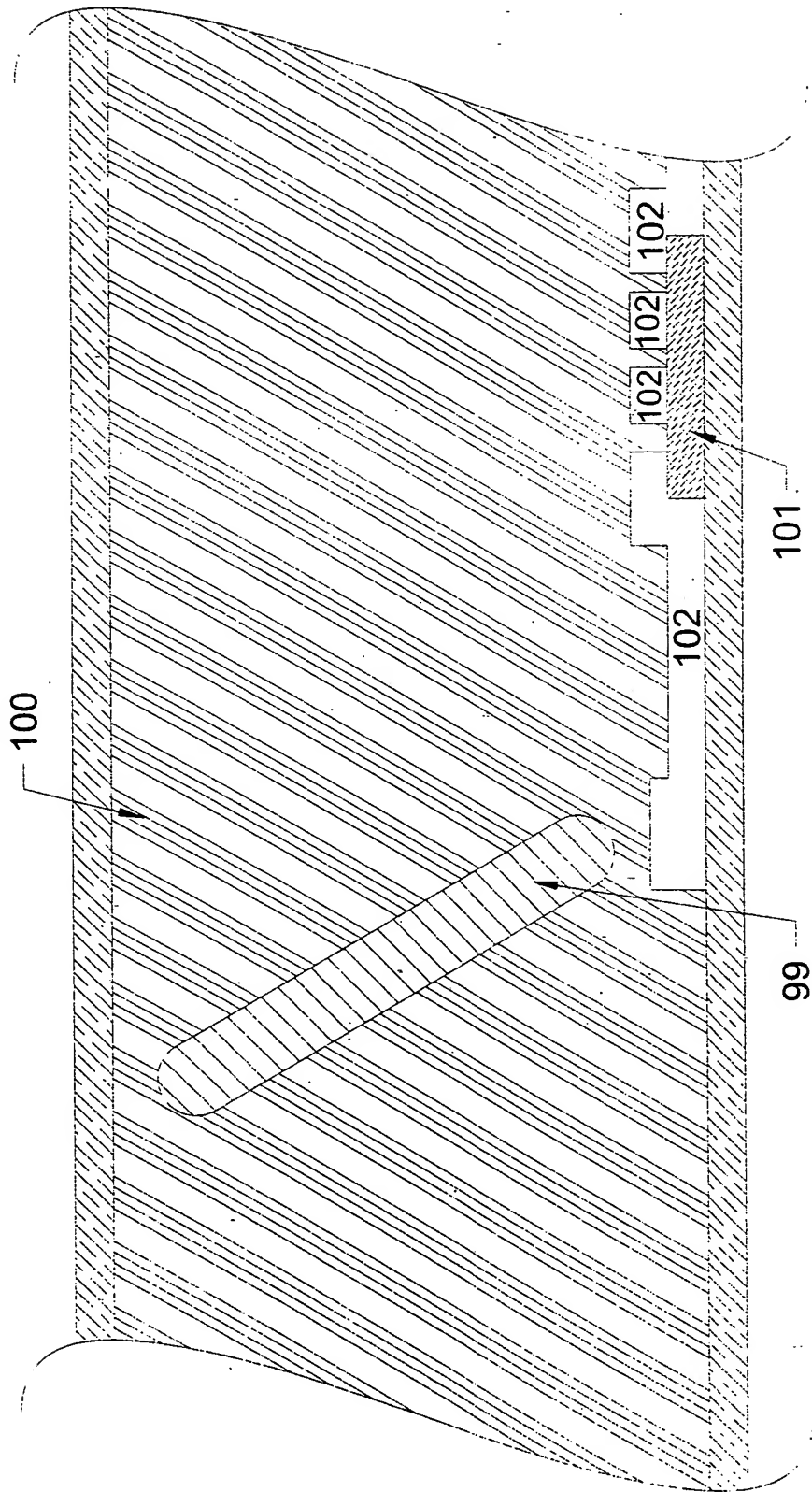


Fig. 26

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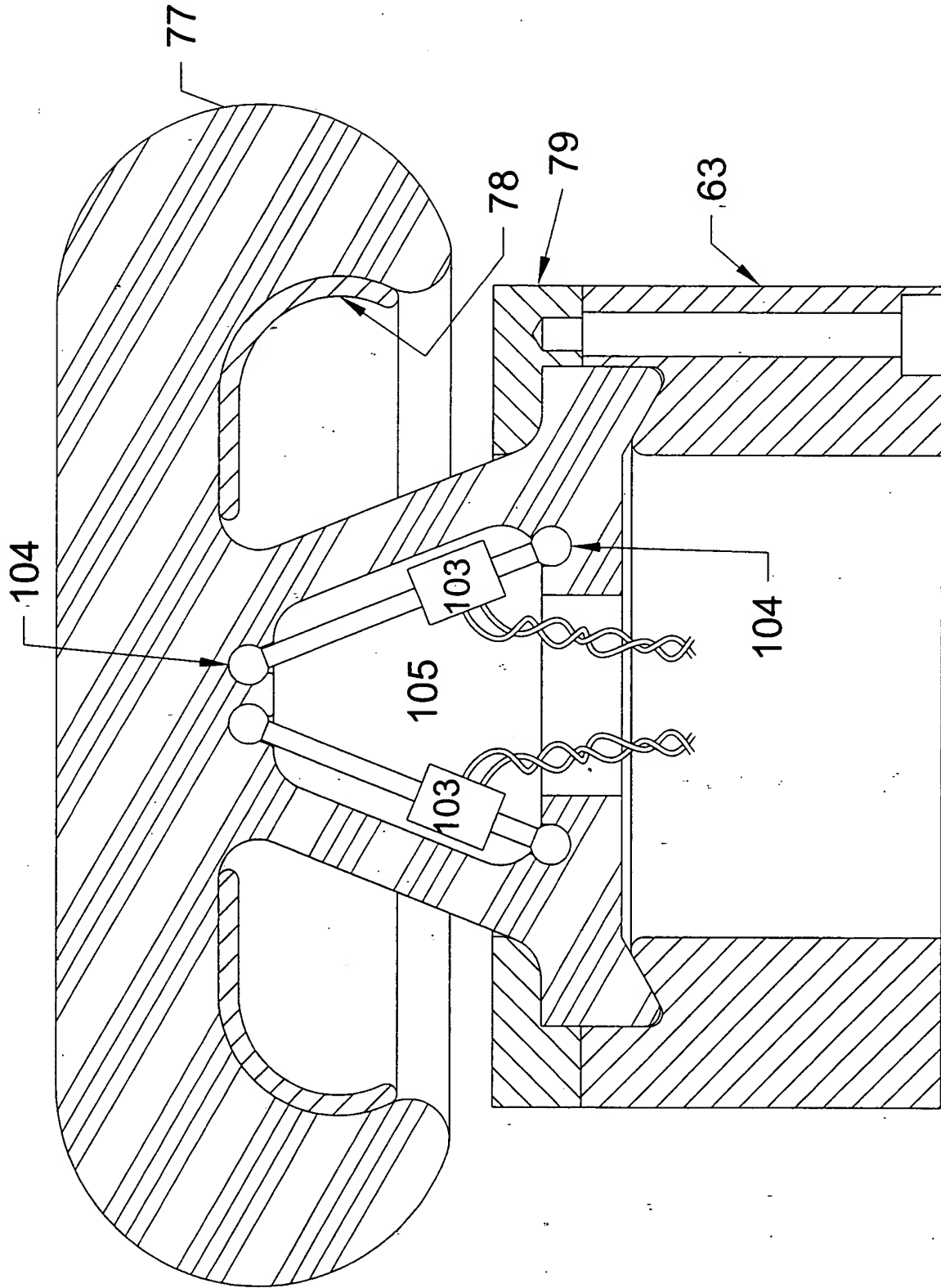


Fig. 27

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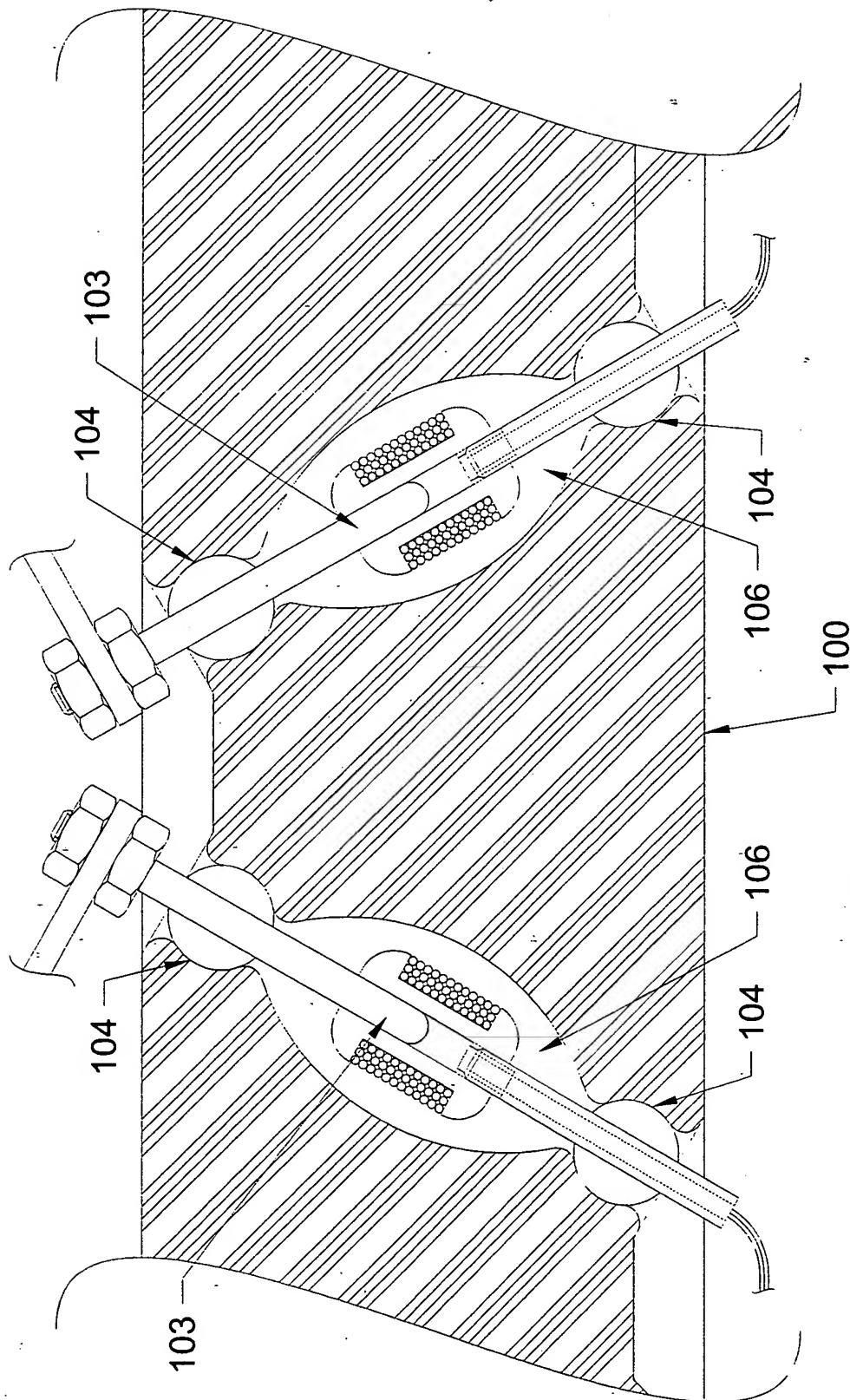


Fig. 28

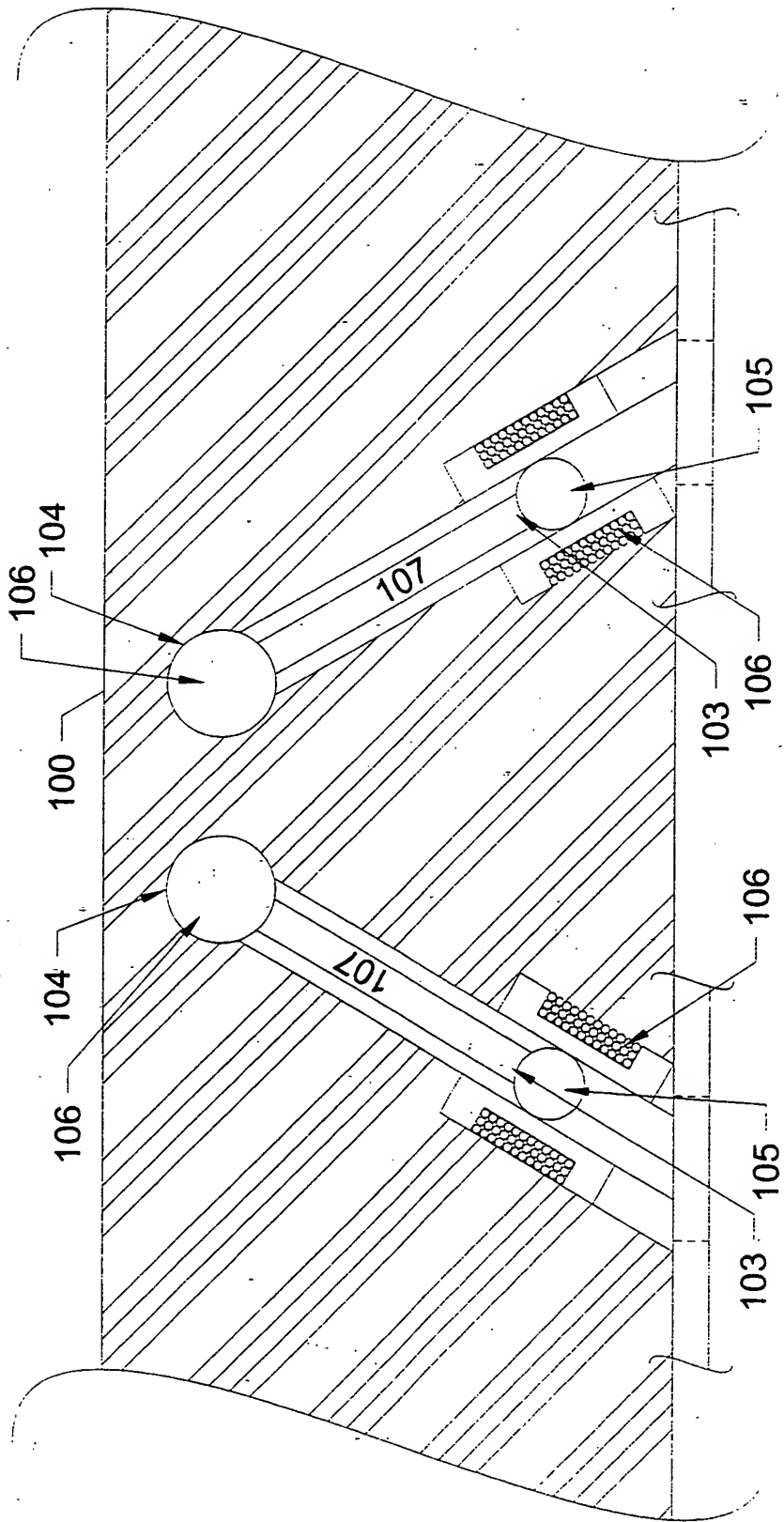


Fig. 29

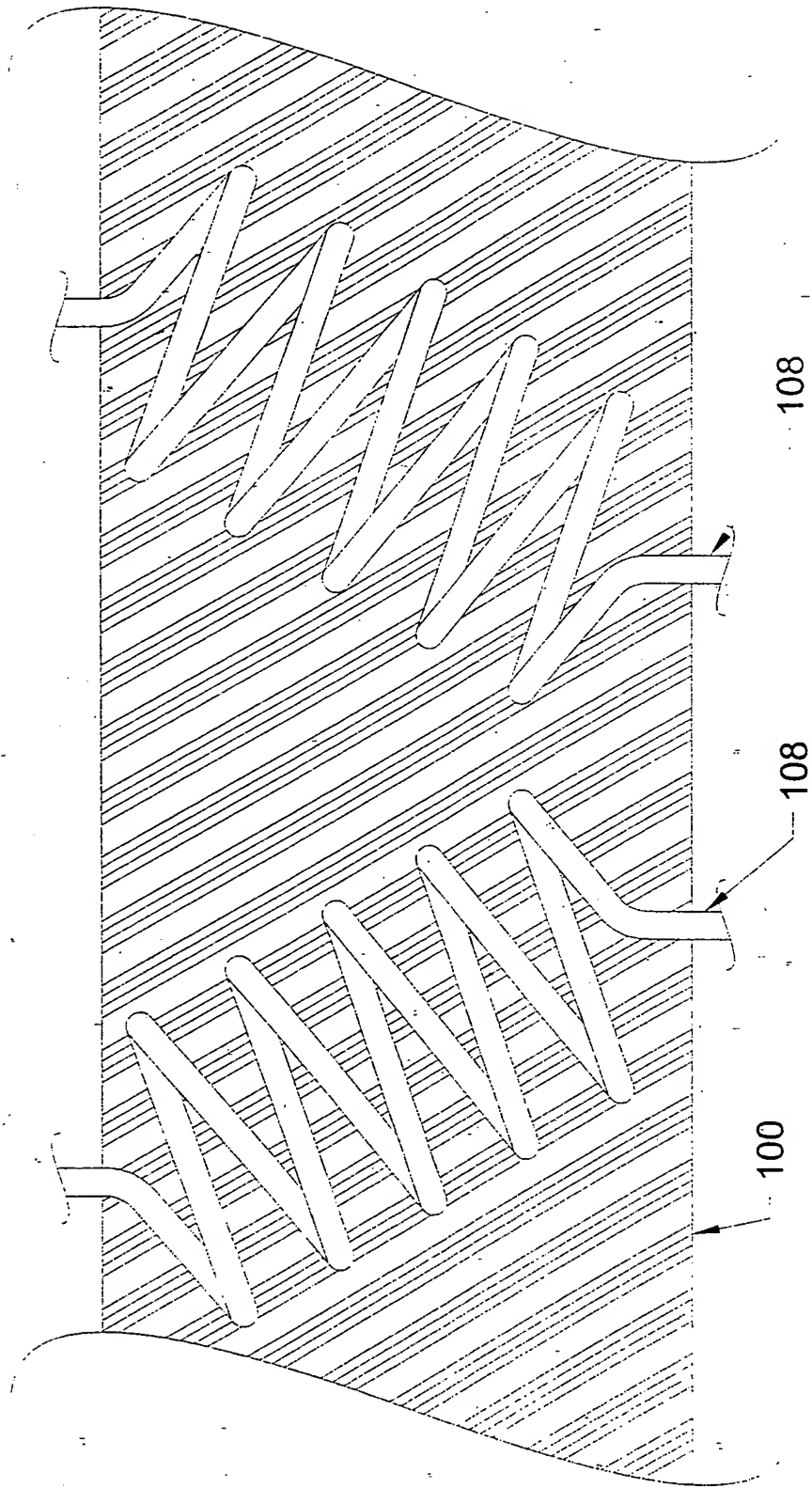


Fig. 30

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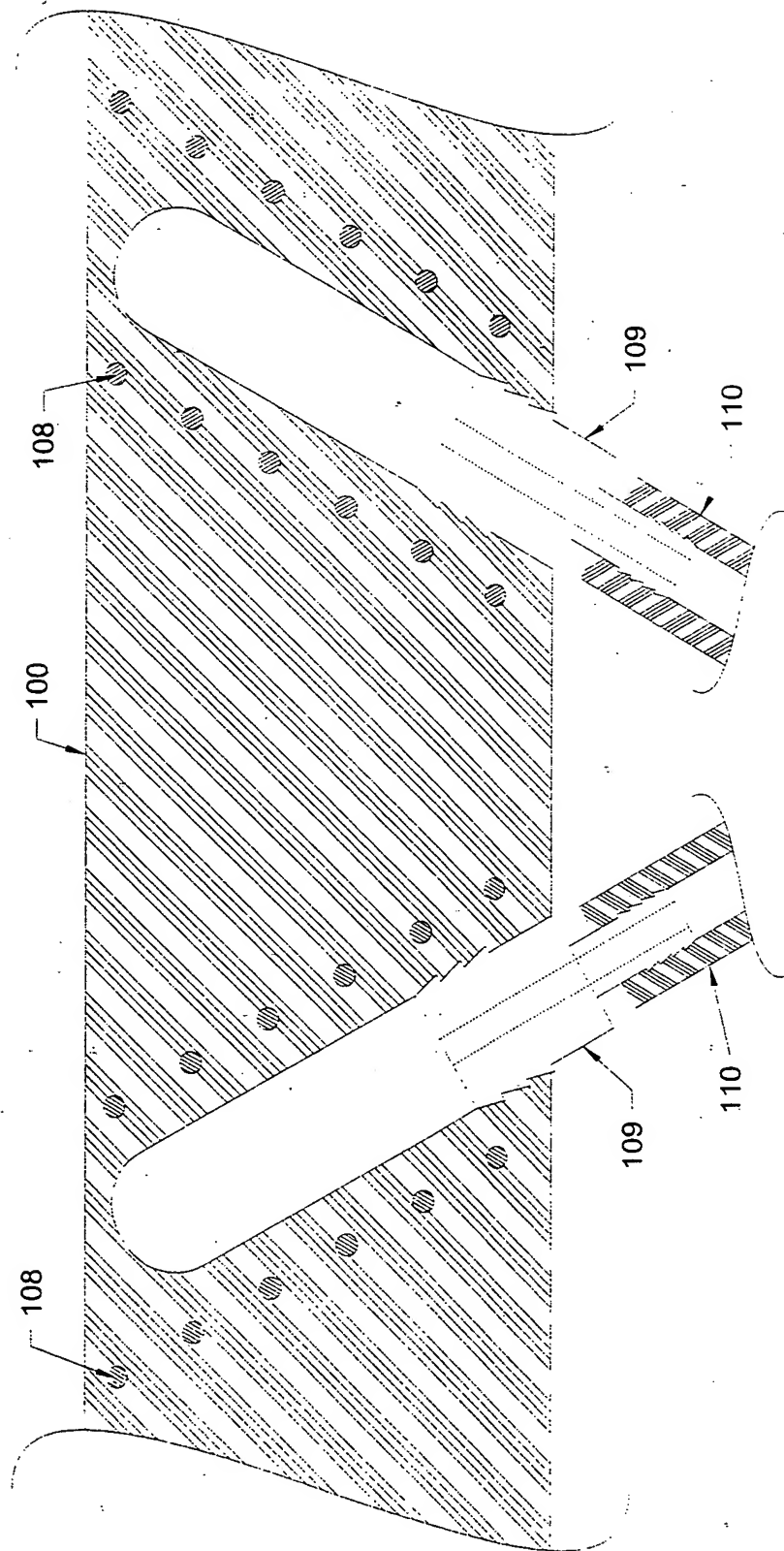


Fig. 31

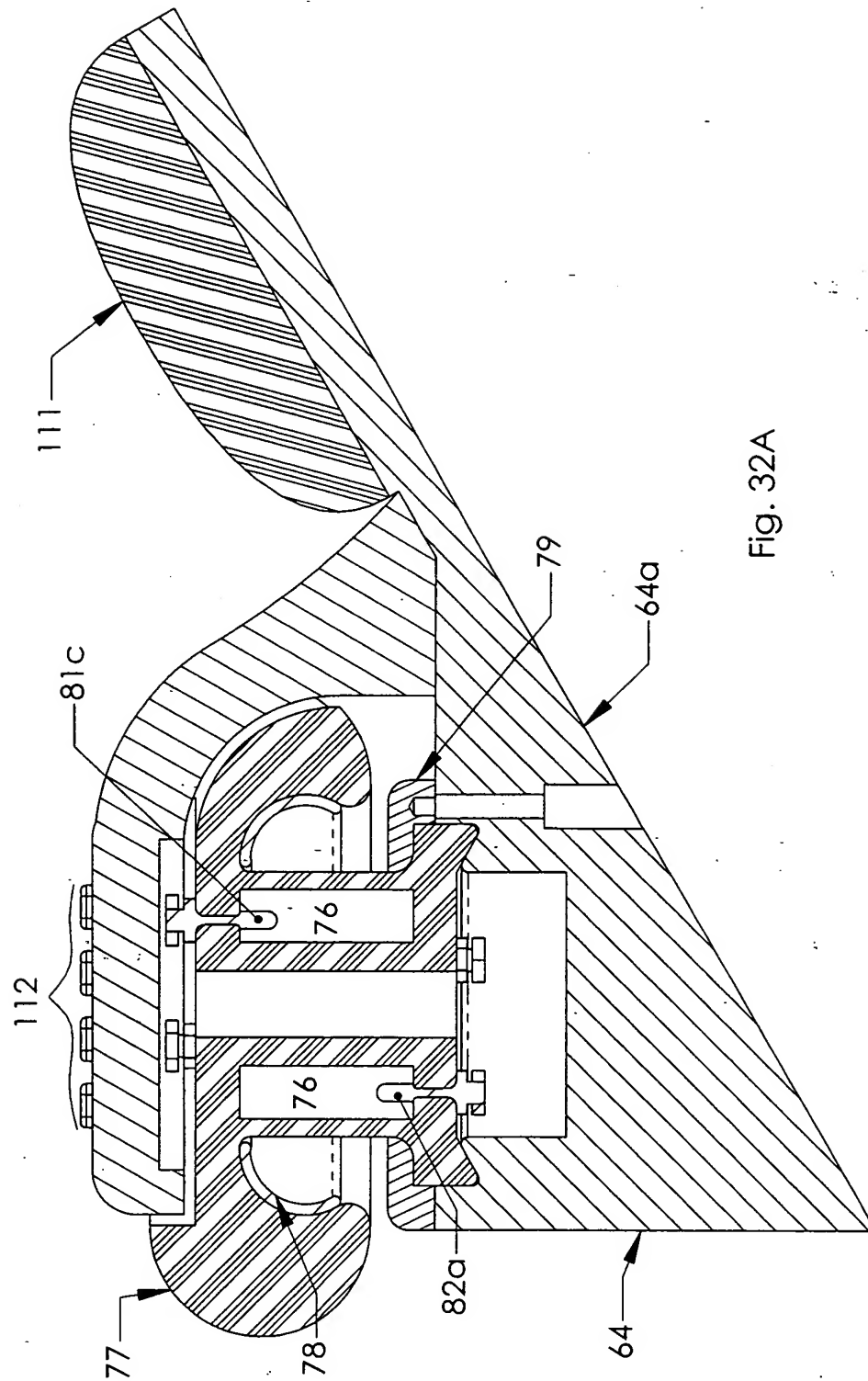


Fig. 32A

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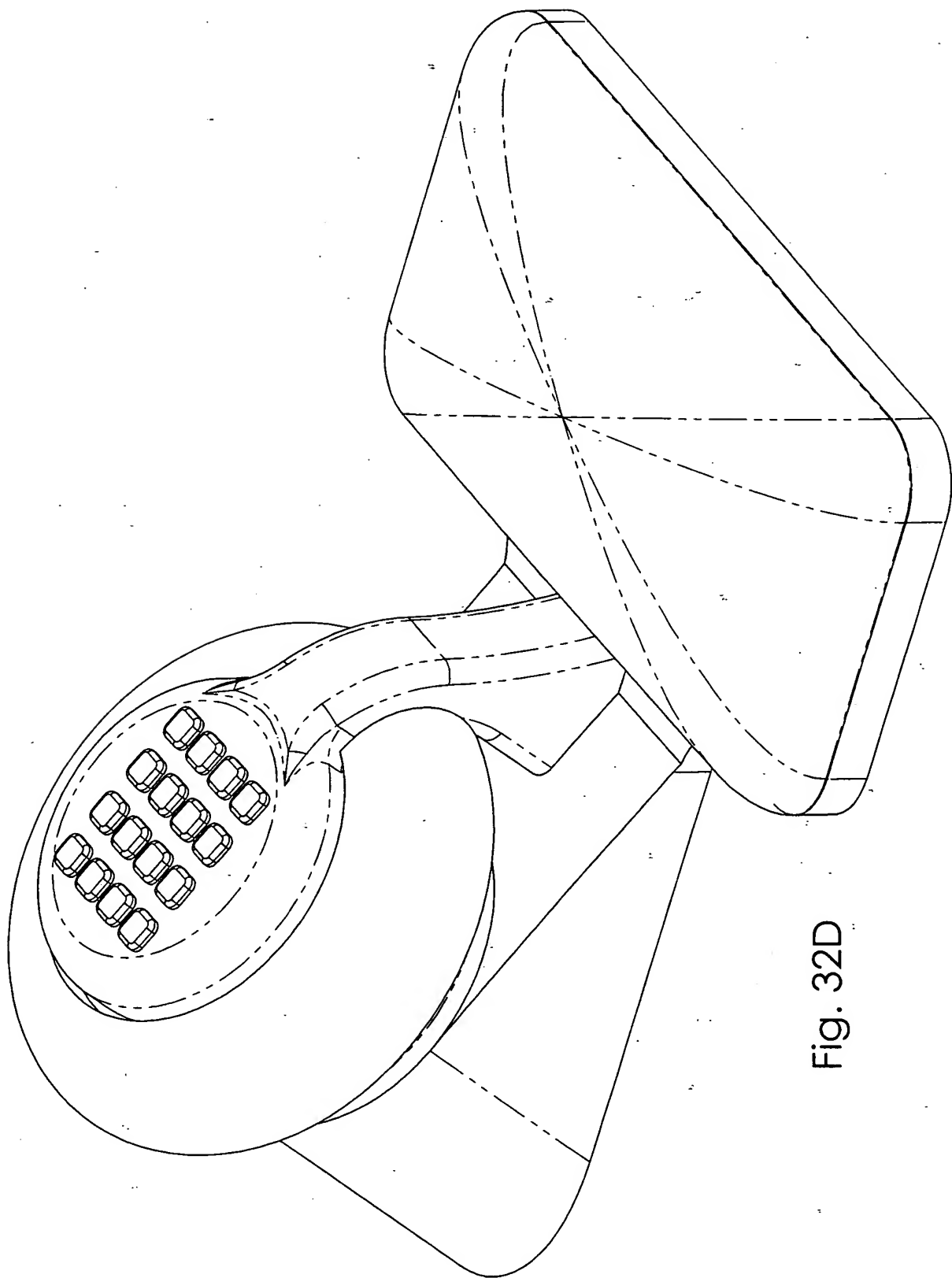


Fig. 32D

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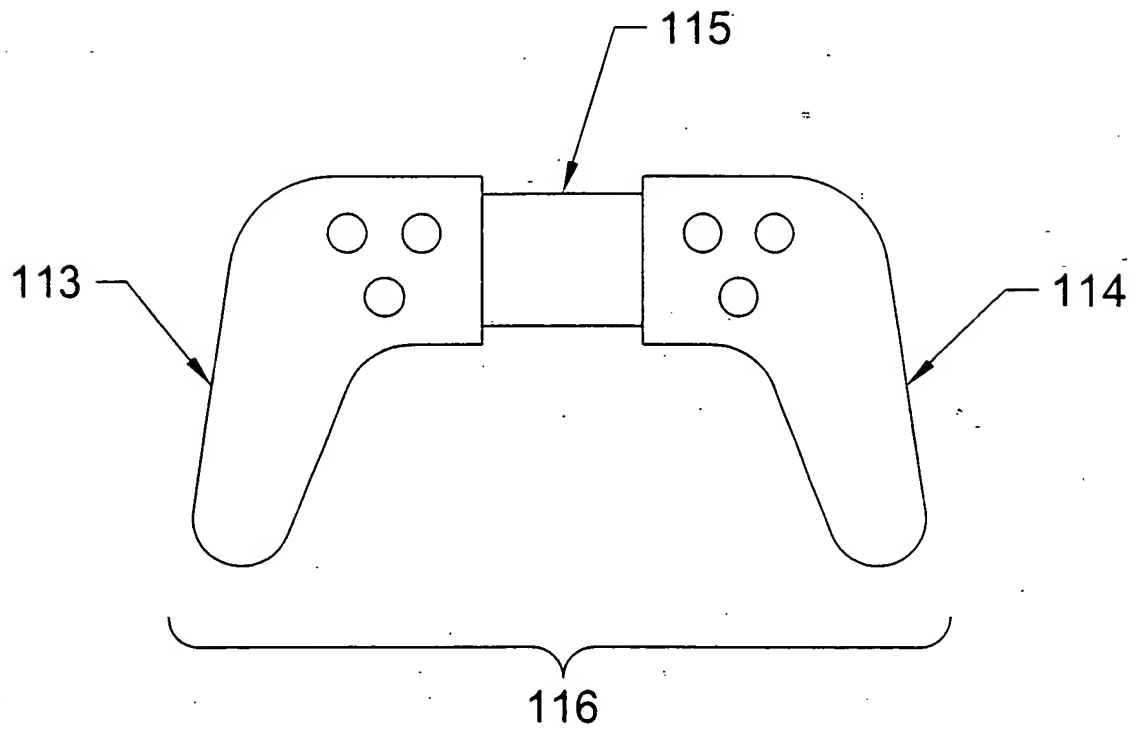


Fig. 33

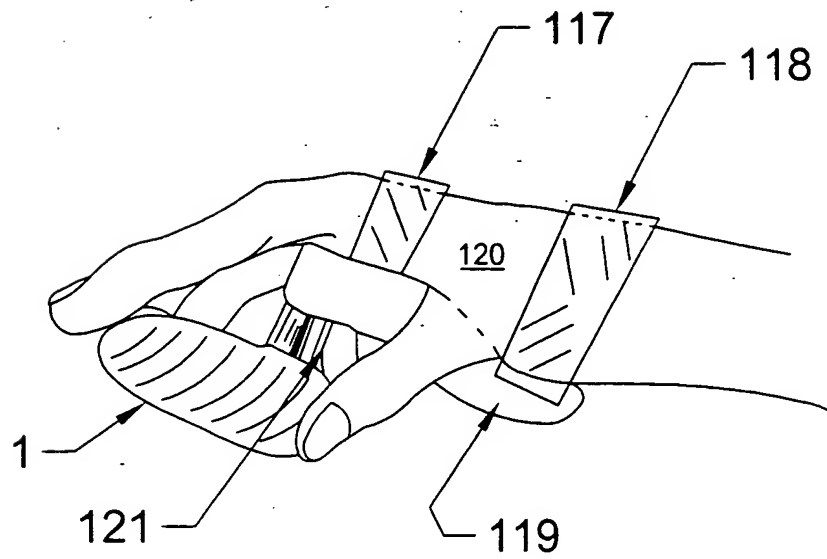
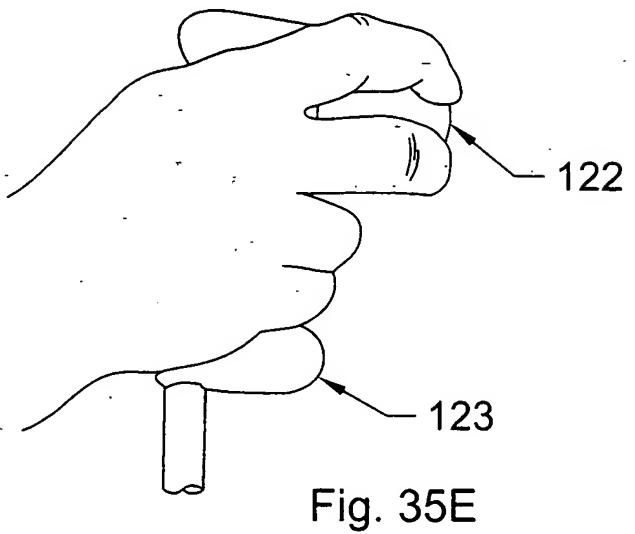
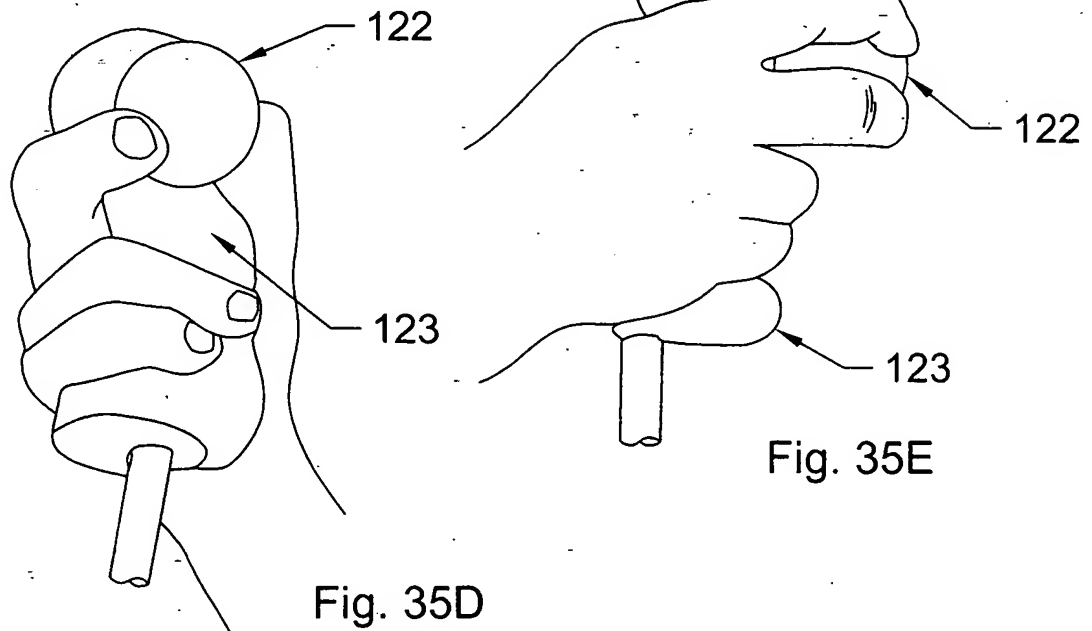
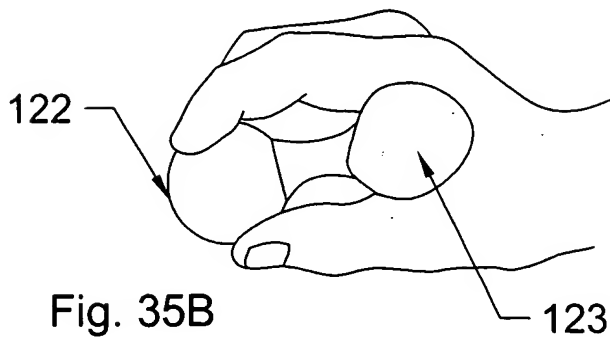
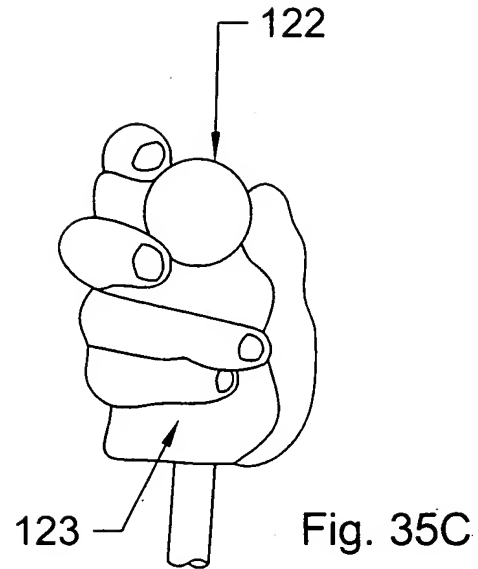
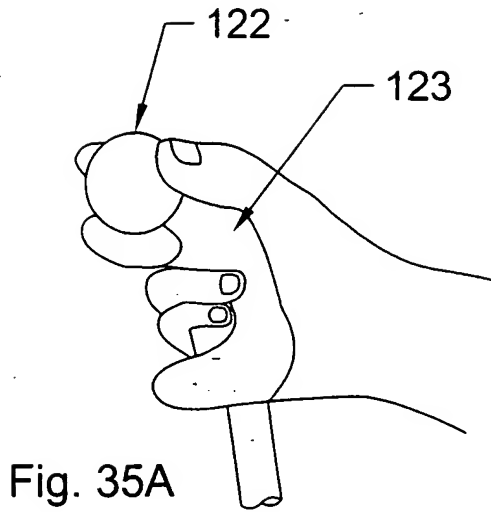
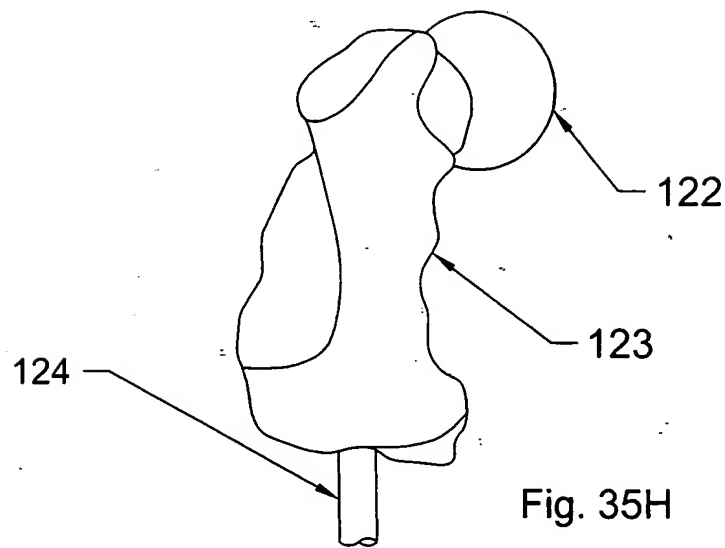
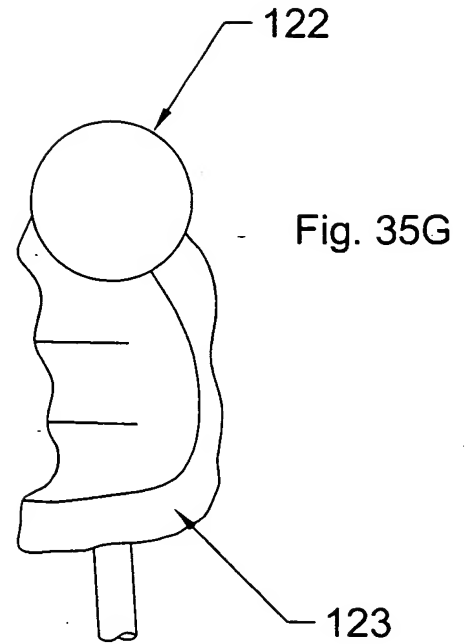
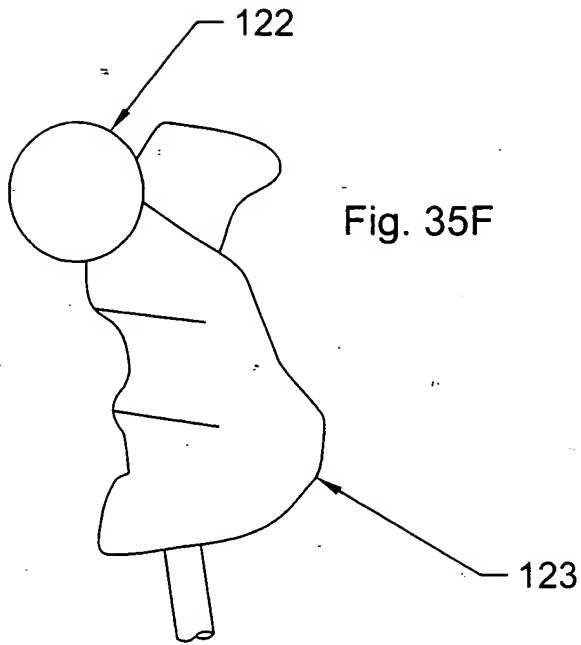


Fig. 34

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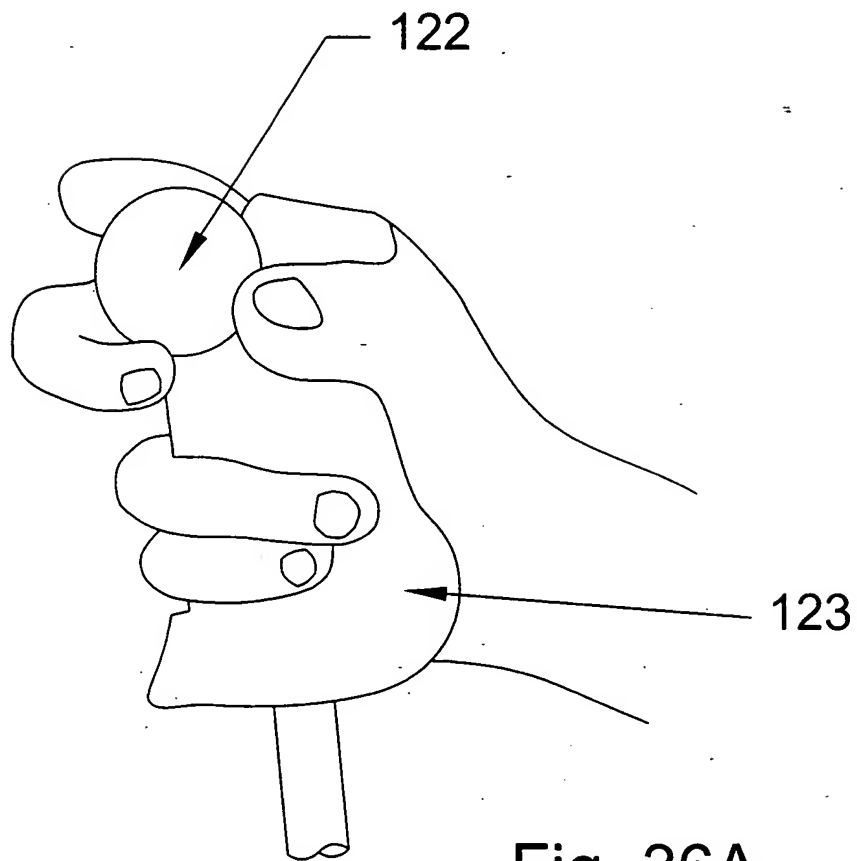


Fig. 36A

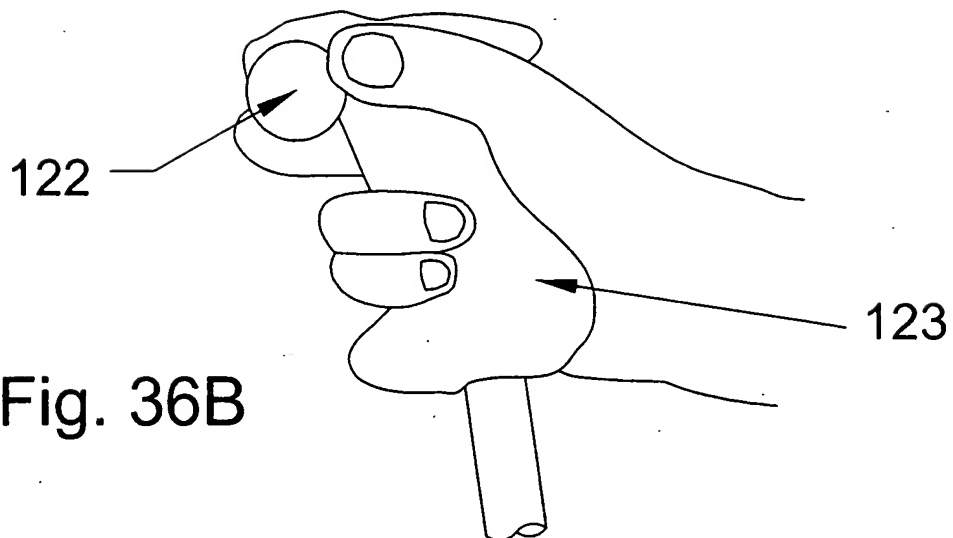
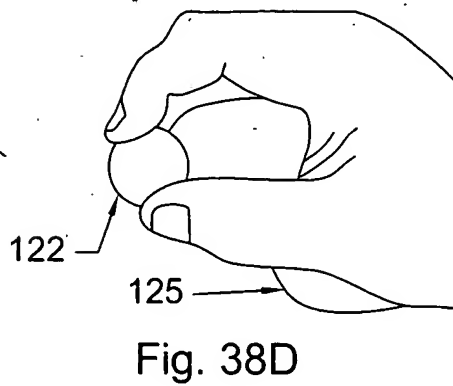
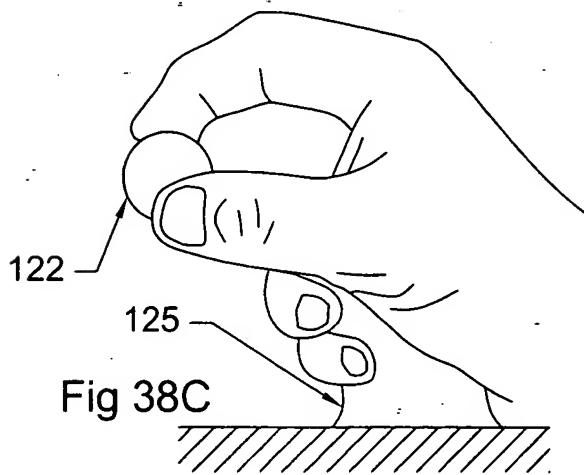
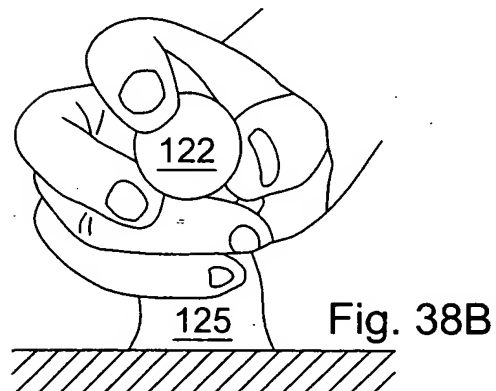
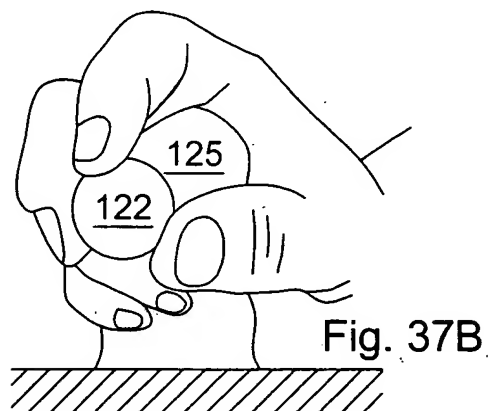
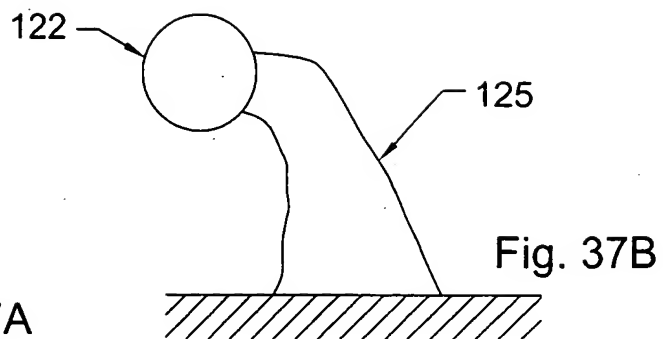
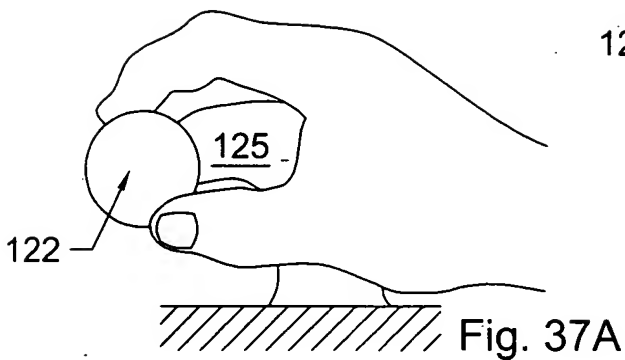
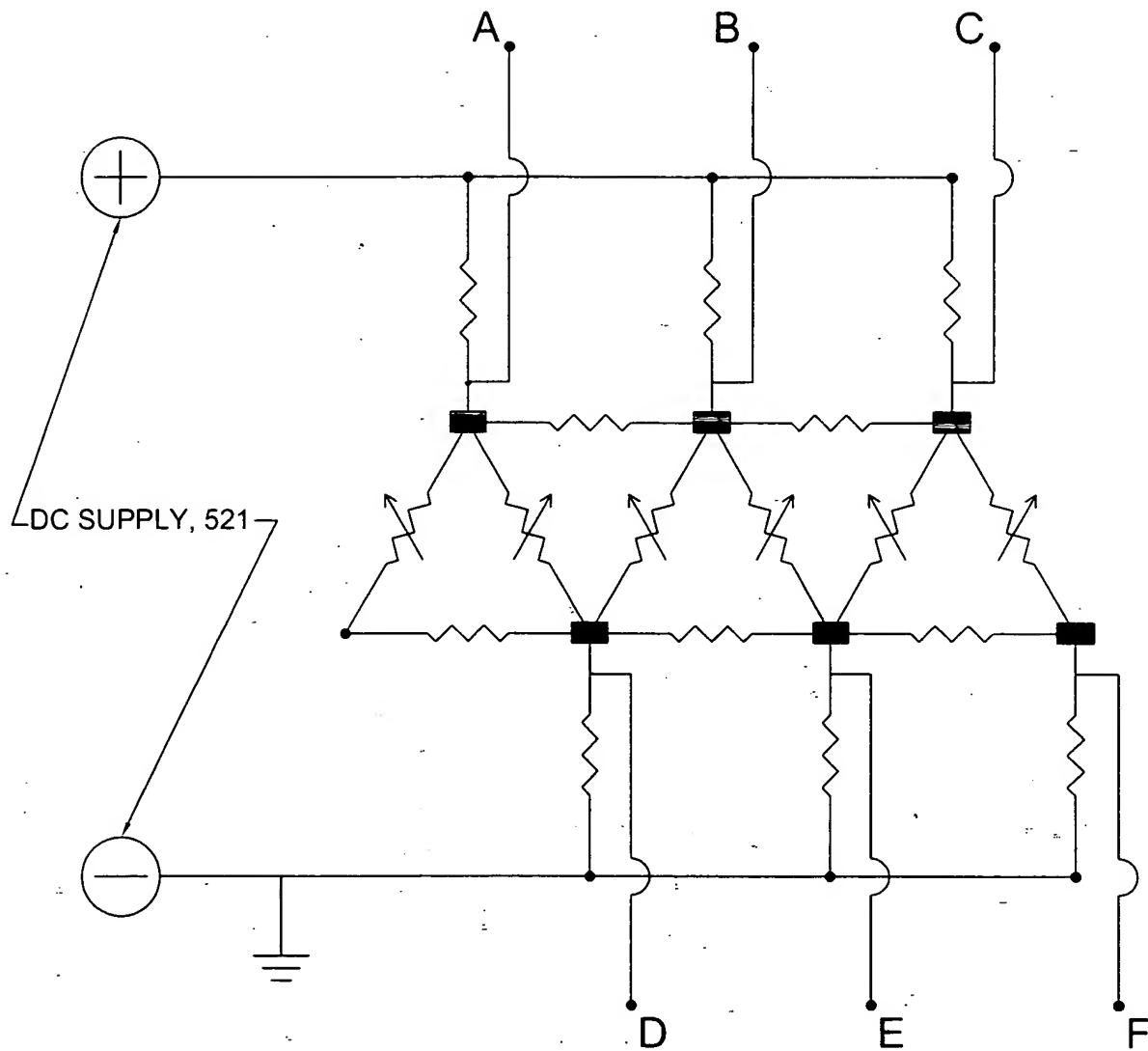


Fig. 36B

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A, B, C, D, E, F, GND ARE CONNECTED TO A/D
CONVERTER CONNECTED TO COMPUTER

Fig. 39

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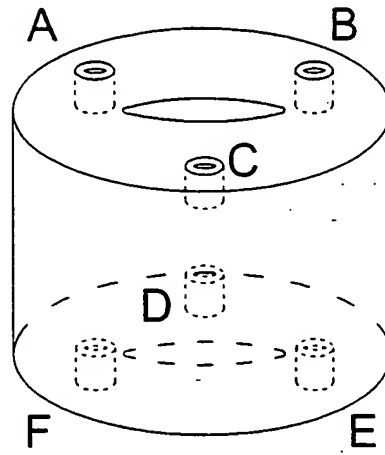


Fig. 40A

ELASTOMERIC SENSING ELEMENT

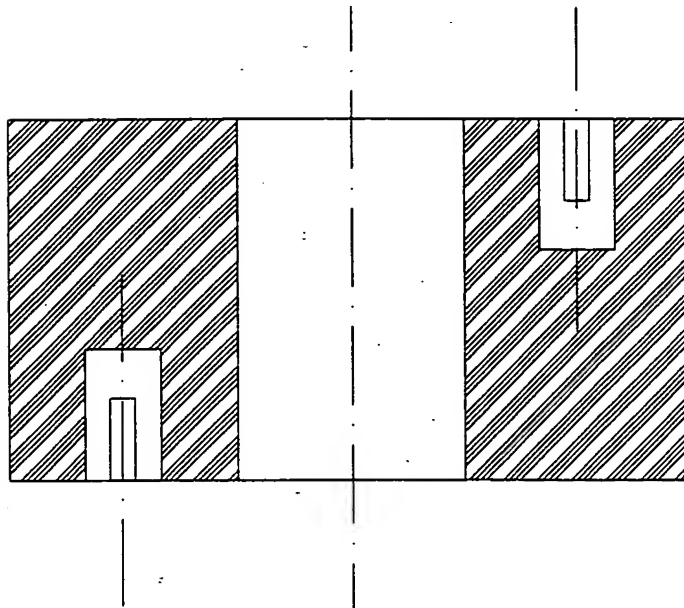


Fig. 40B

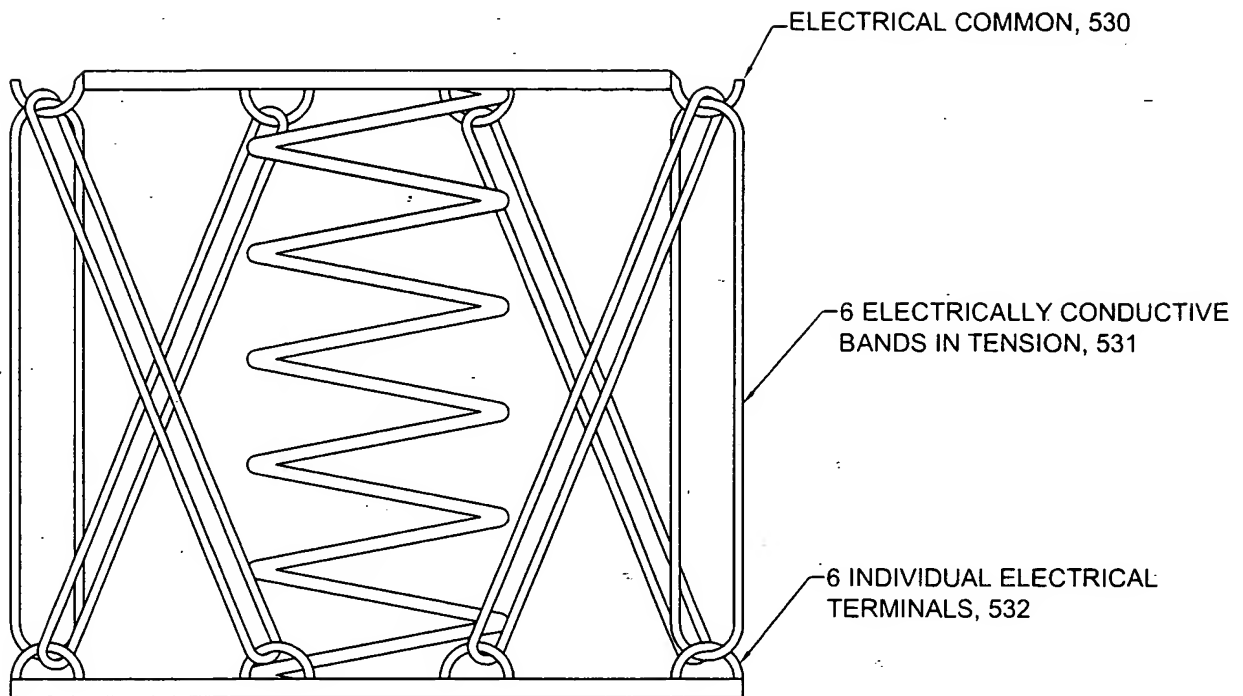


Fig. 41

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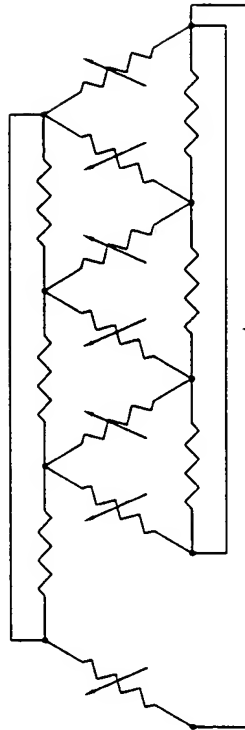


Fig. 43

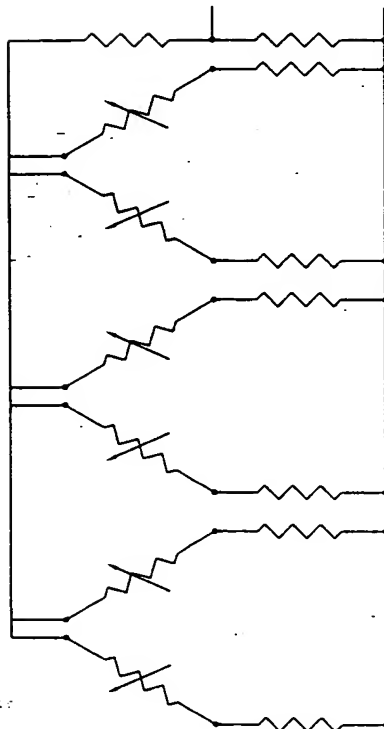


Fig. 42

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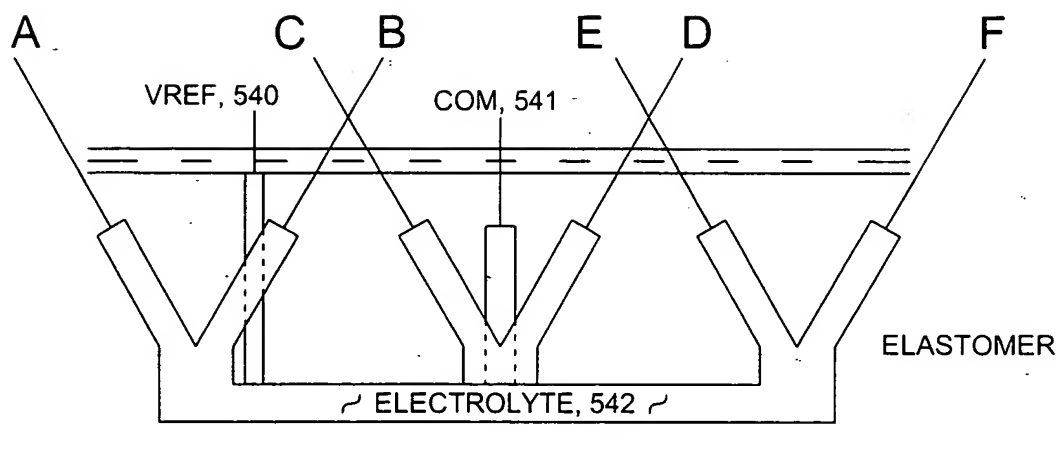


Fig. 44

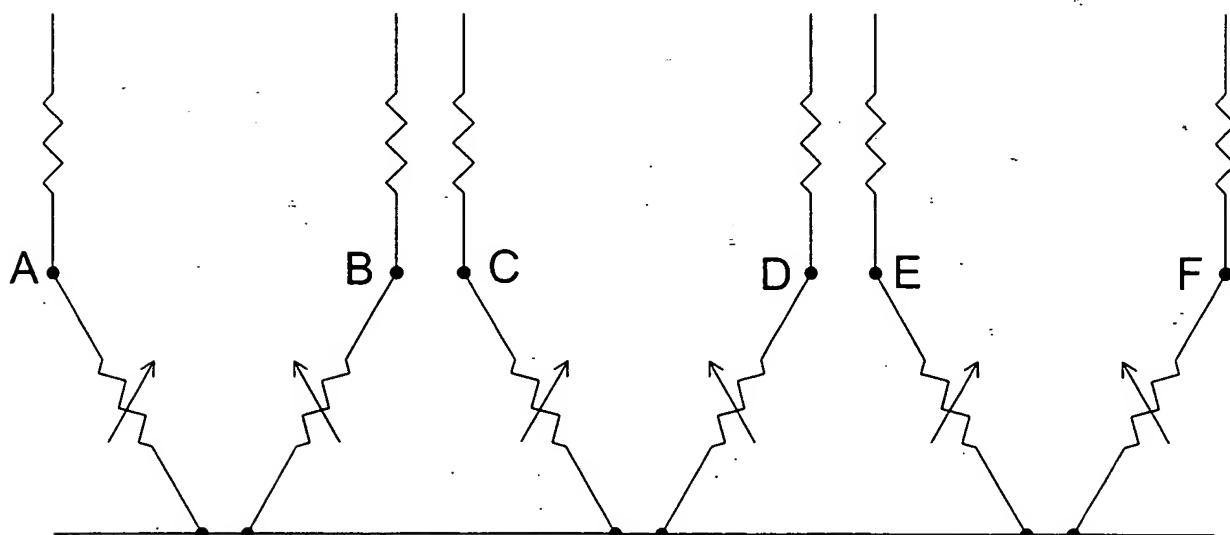
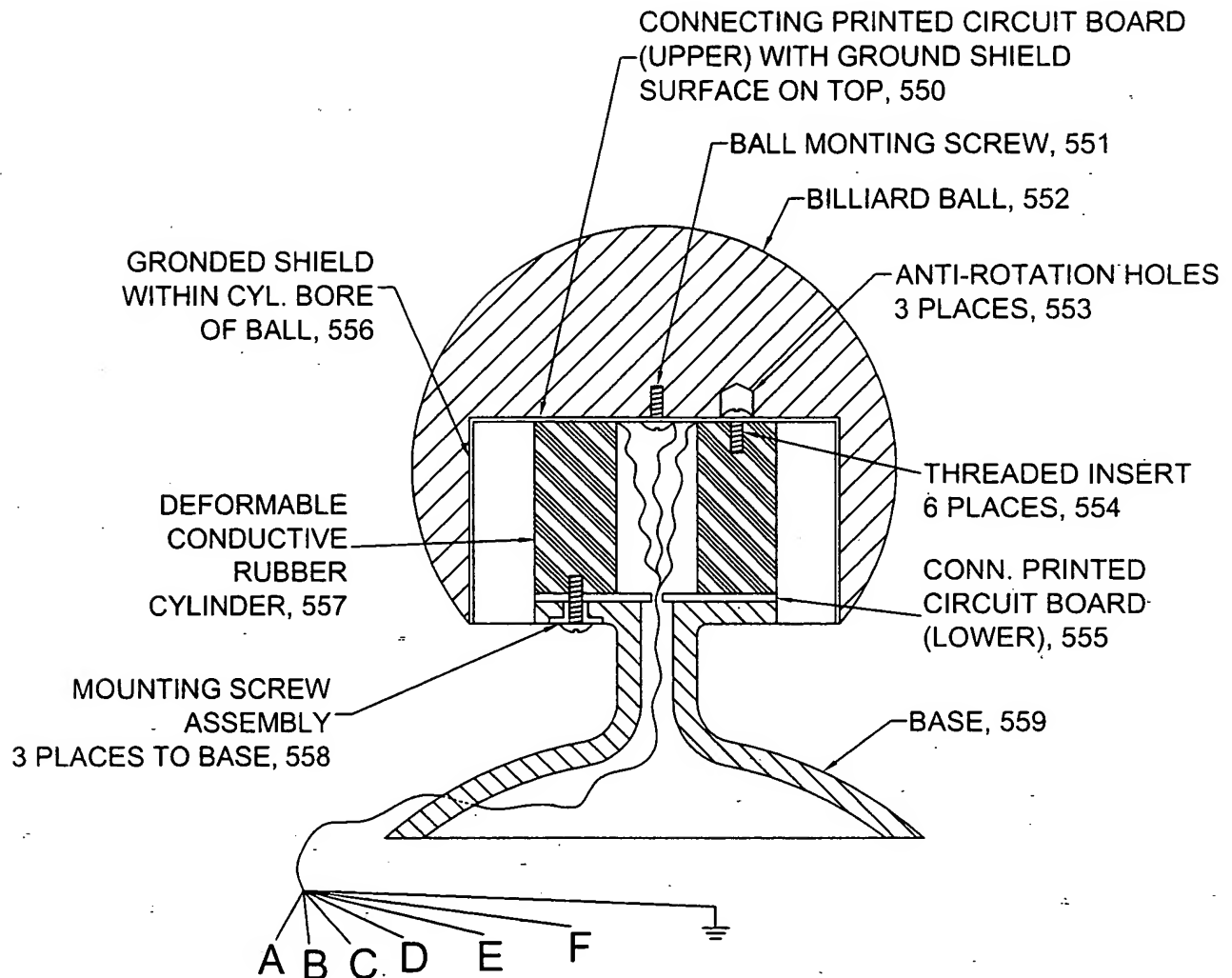


Fig. 45

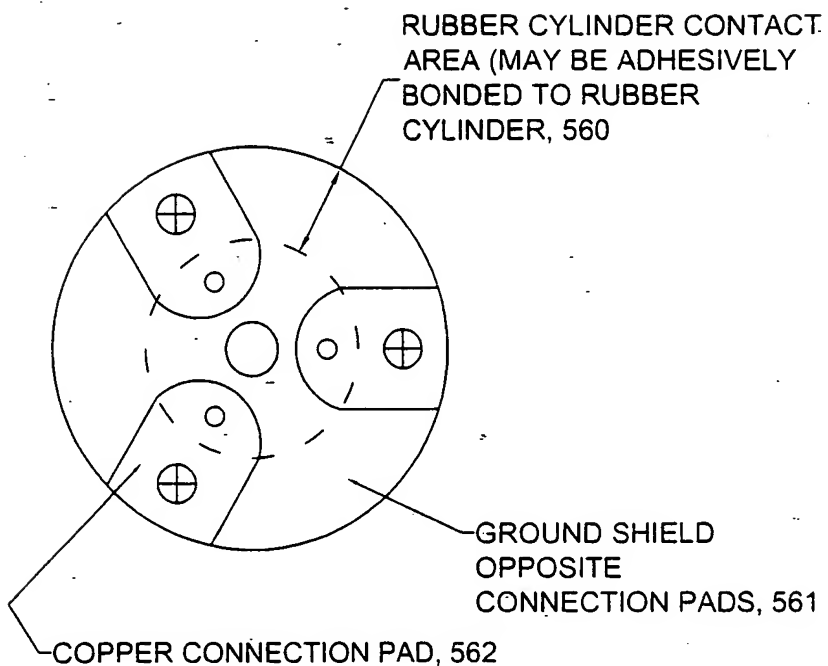
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6-AXIS INPUT DEVICE

Fig. 46

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CONNECTING PRINTED
CIRCUIT BOARD (TYP)

Fig. 48

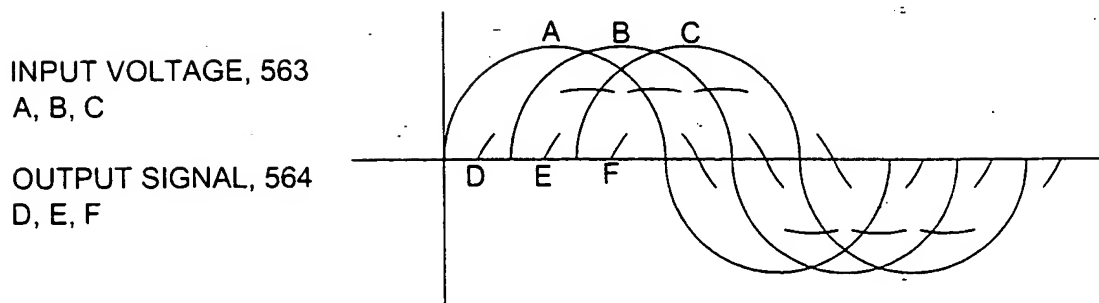


Fig. 47

VOLTAGES AND PHASE ANGLES OF D,
E, AND F ARE A FUNCTION OF BALL
POSITION AND ORIENTATION, 565

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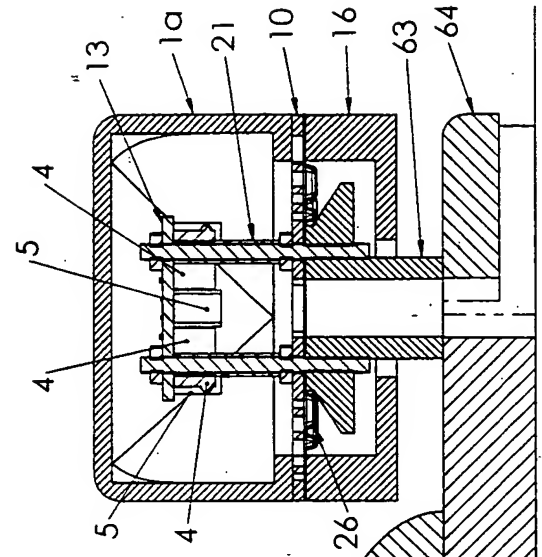
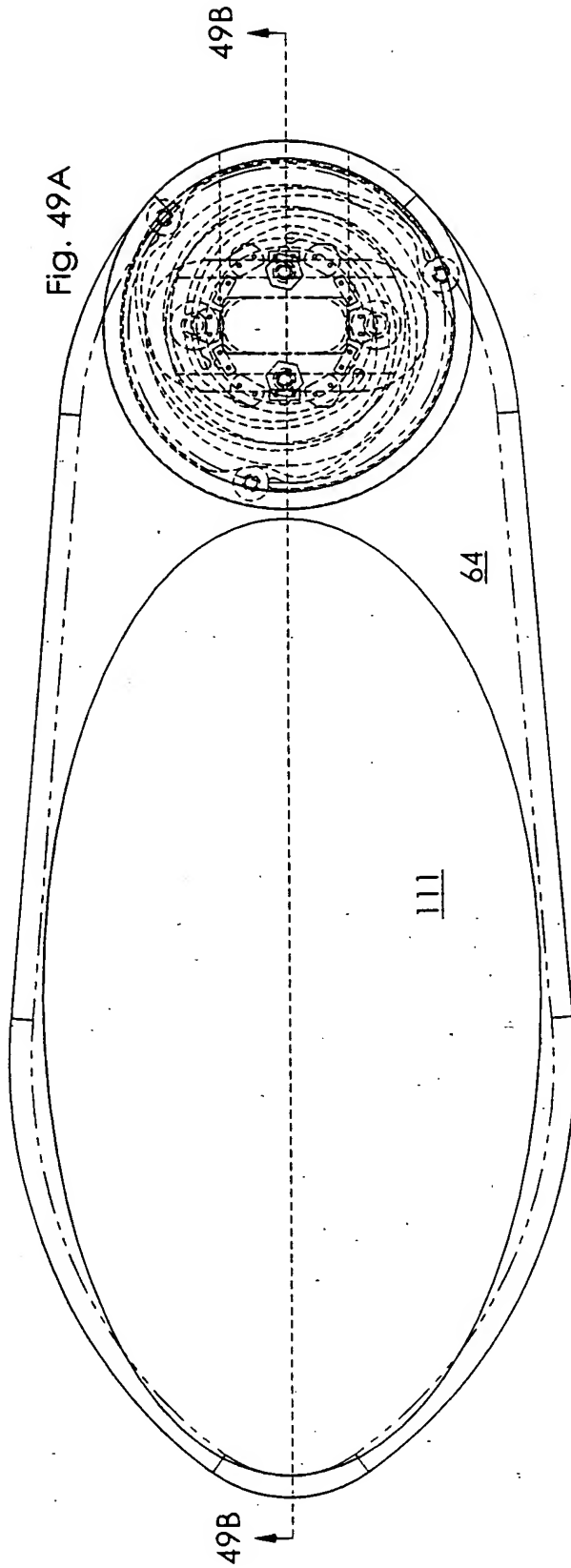


Fig. 49B

111

126

0104 H500 P01 H500 5 001 5001

10/511110

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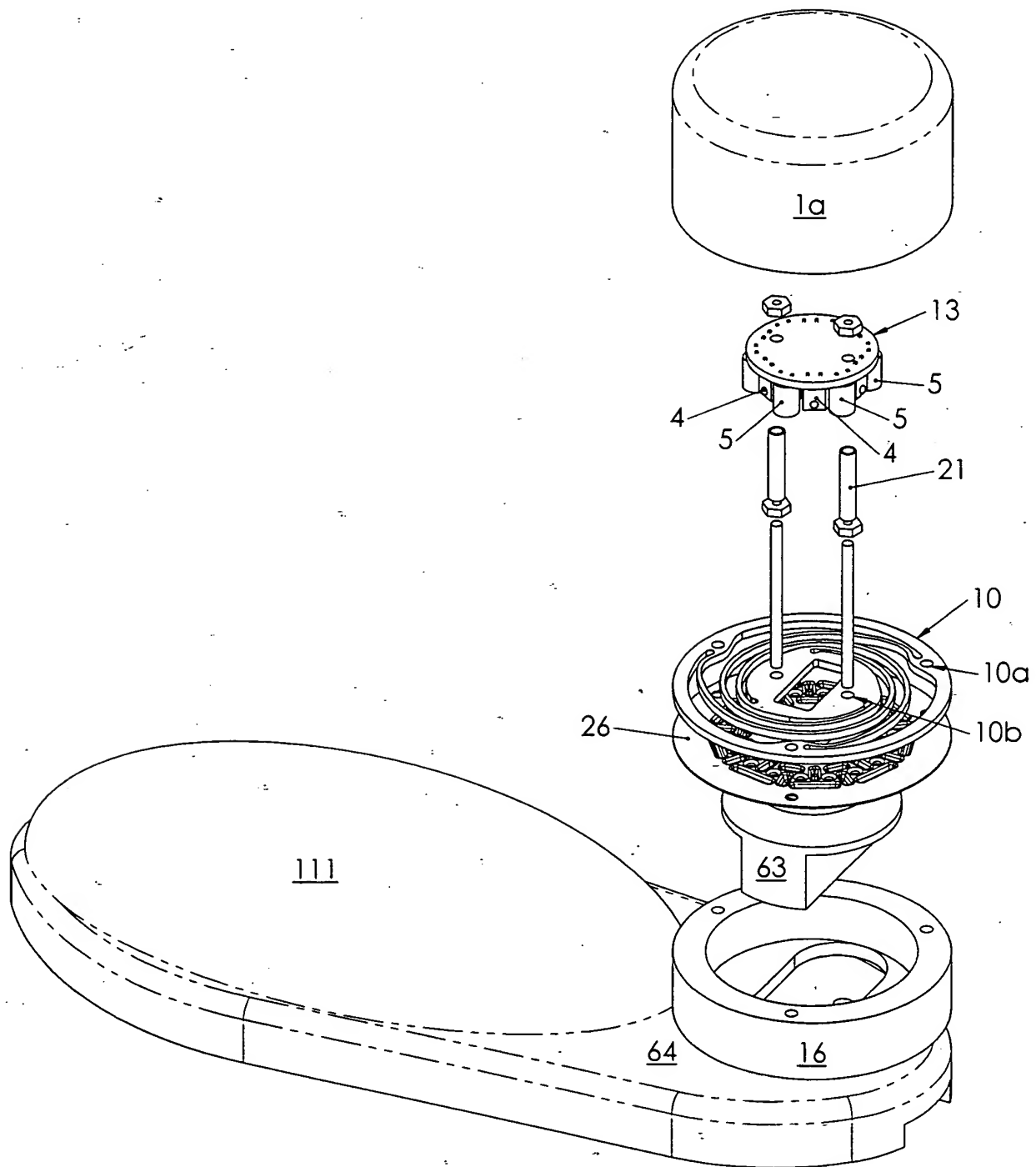


Fig. 49C

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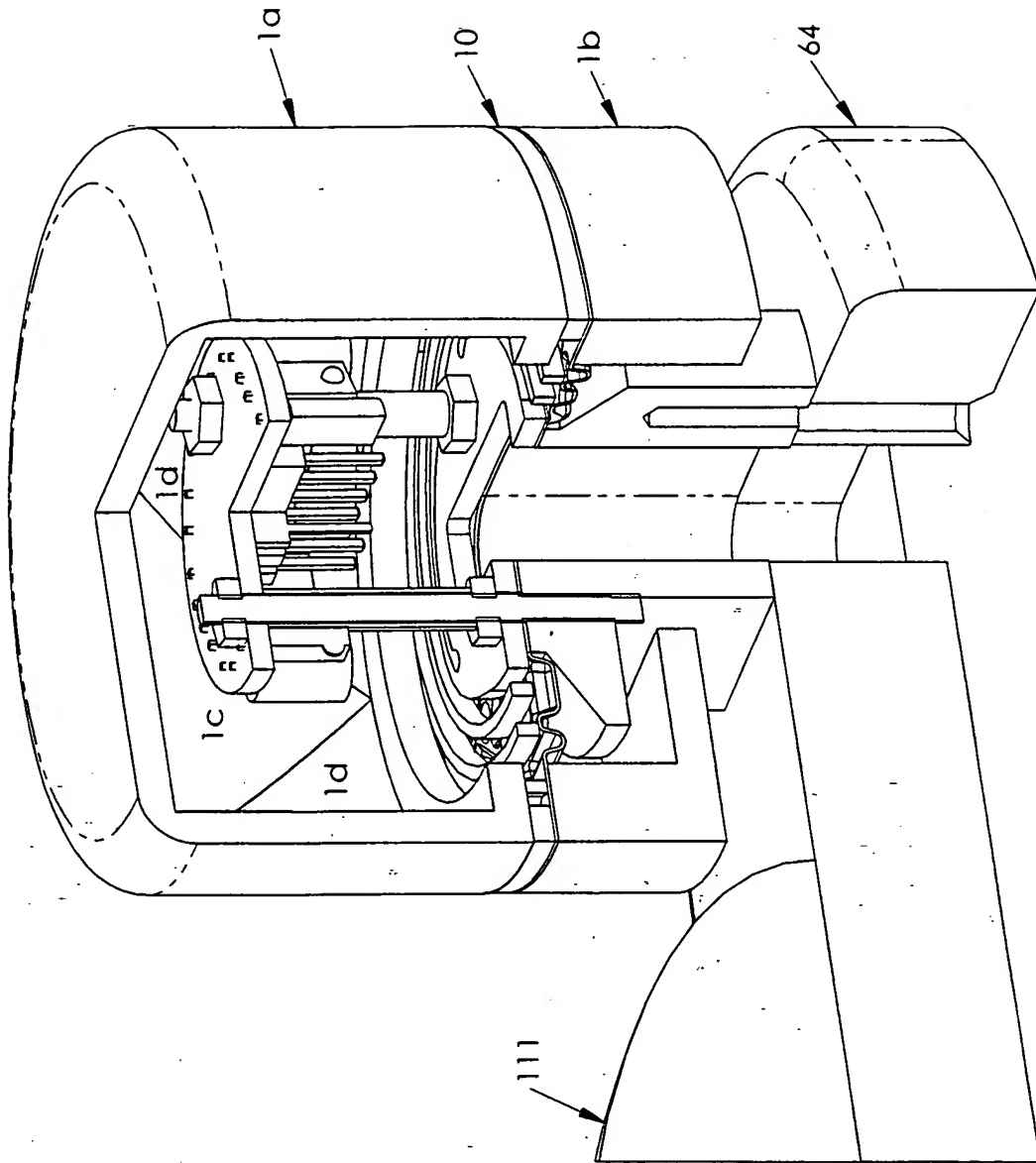
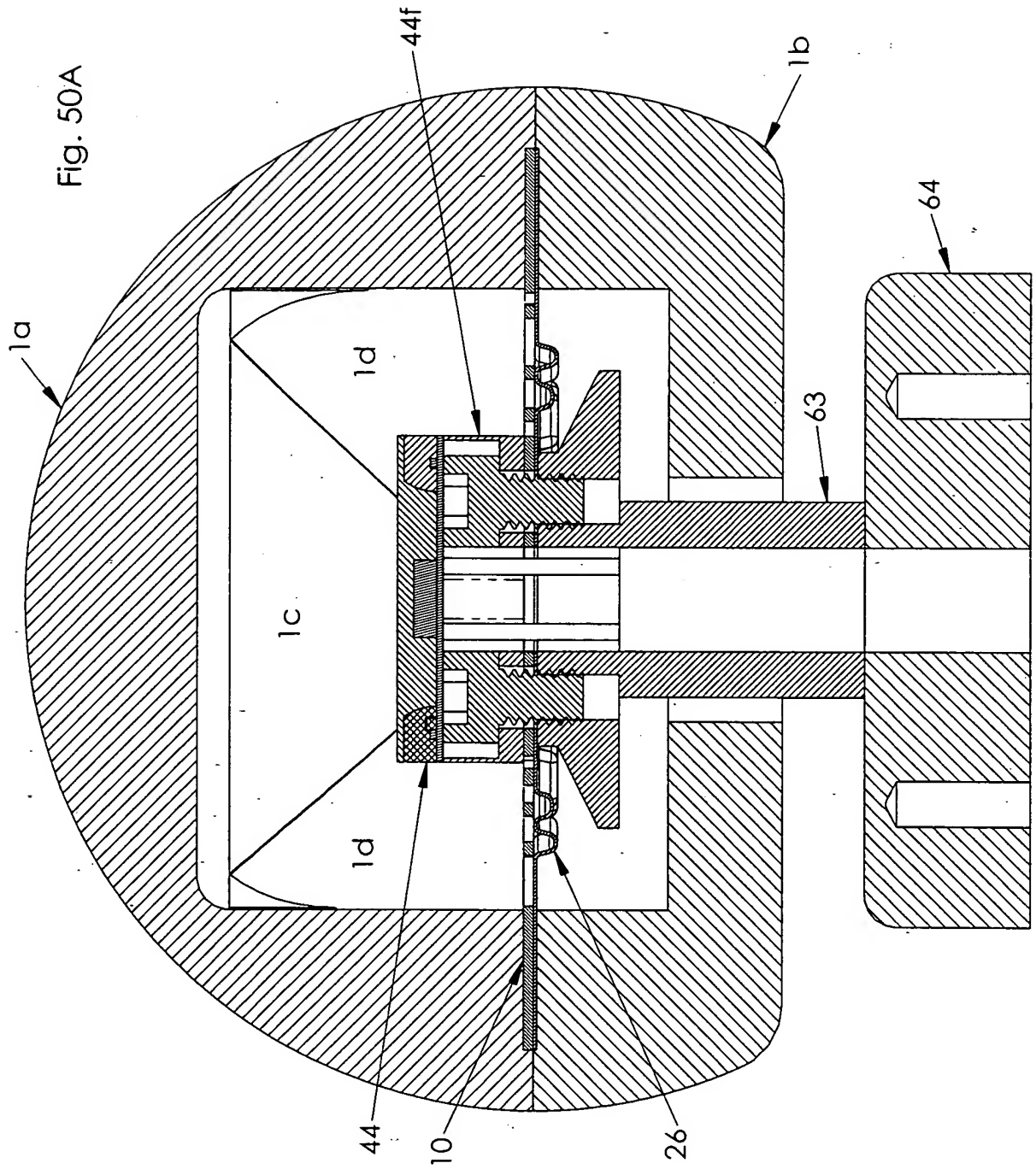


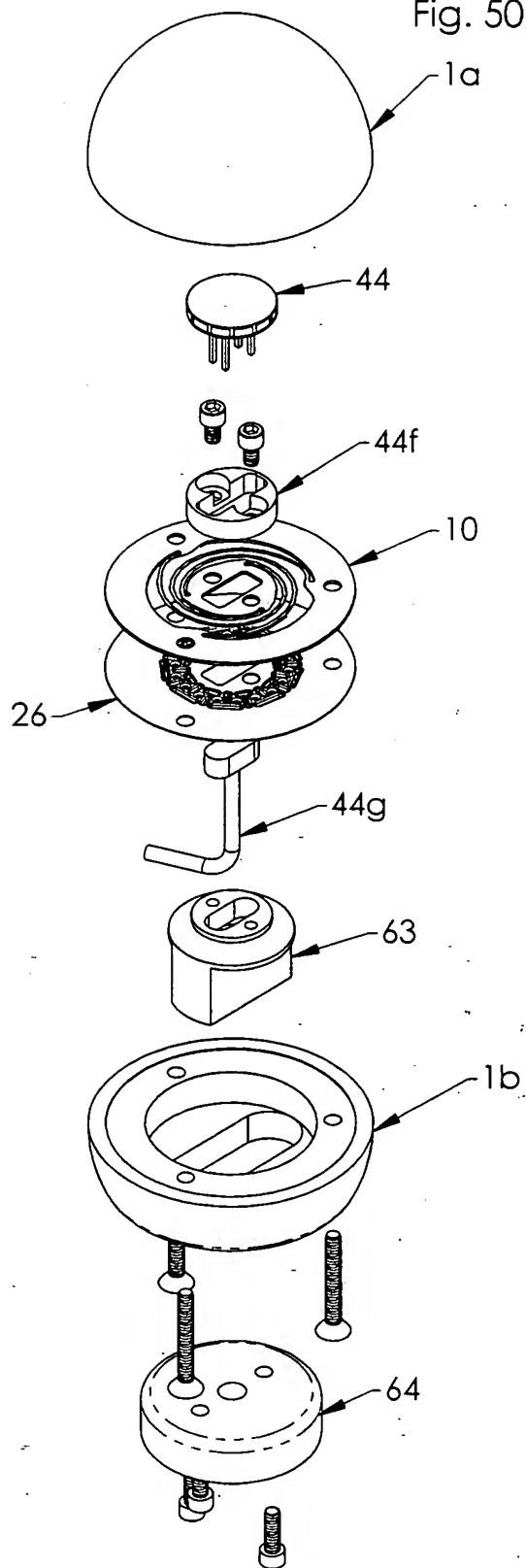
Fig. 49D

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Fig. 50B



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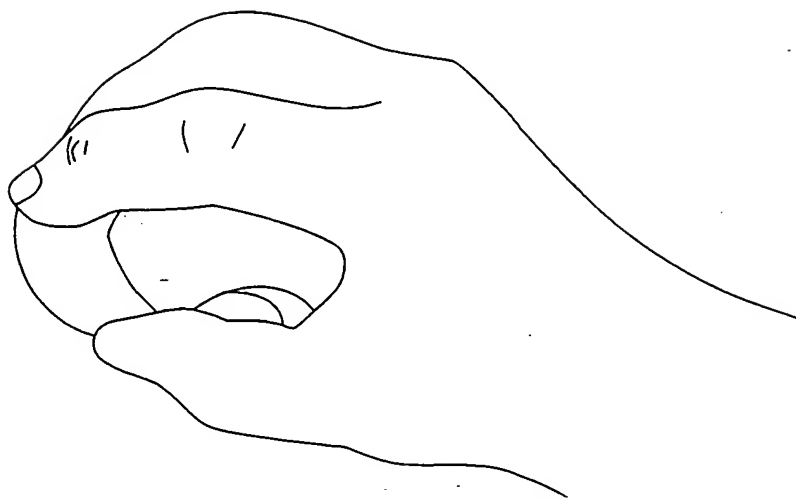


Fig. 51A

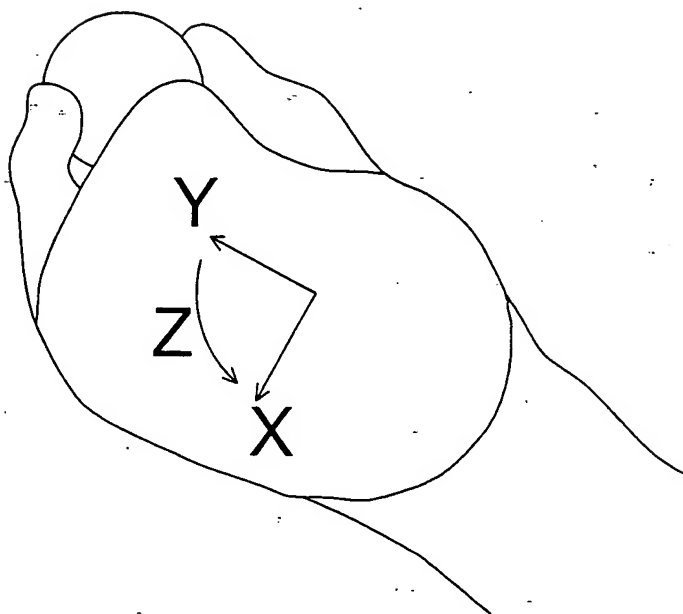


Fig. 51B

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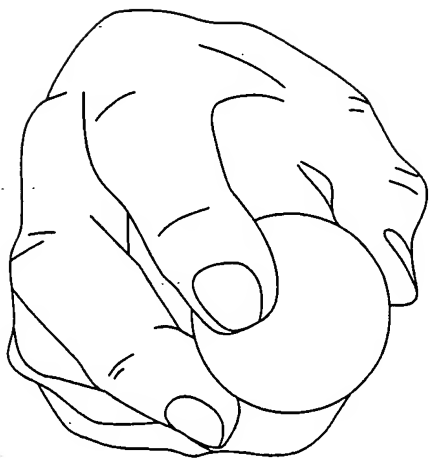


Fig. 51C

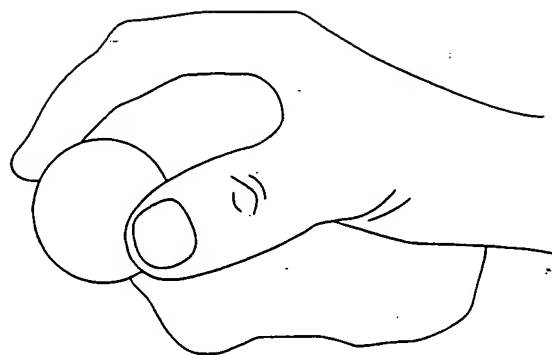


Fig. 51D

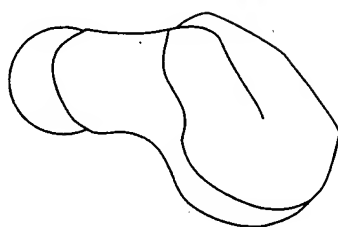


Fig. 51E

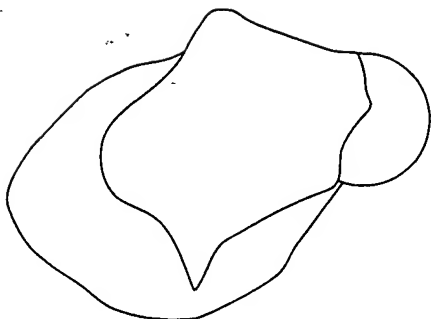


Fig. 51F

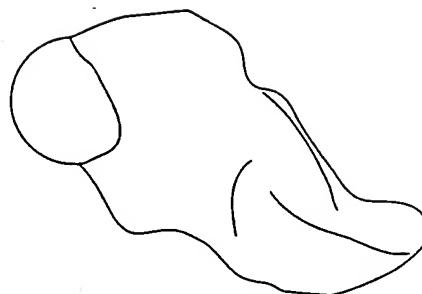


Fig. 51G

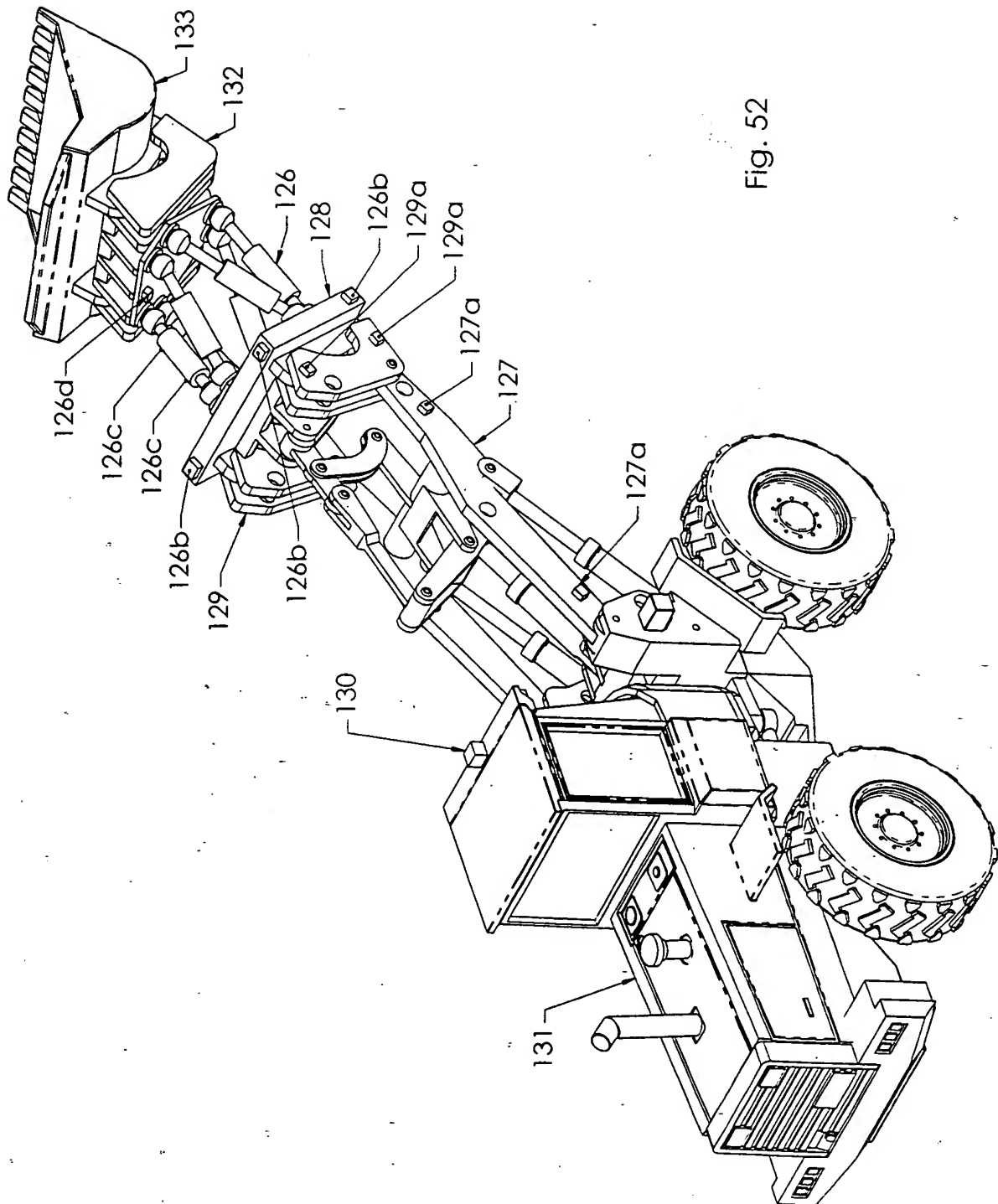
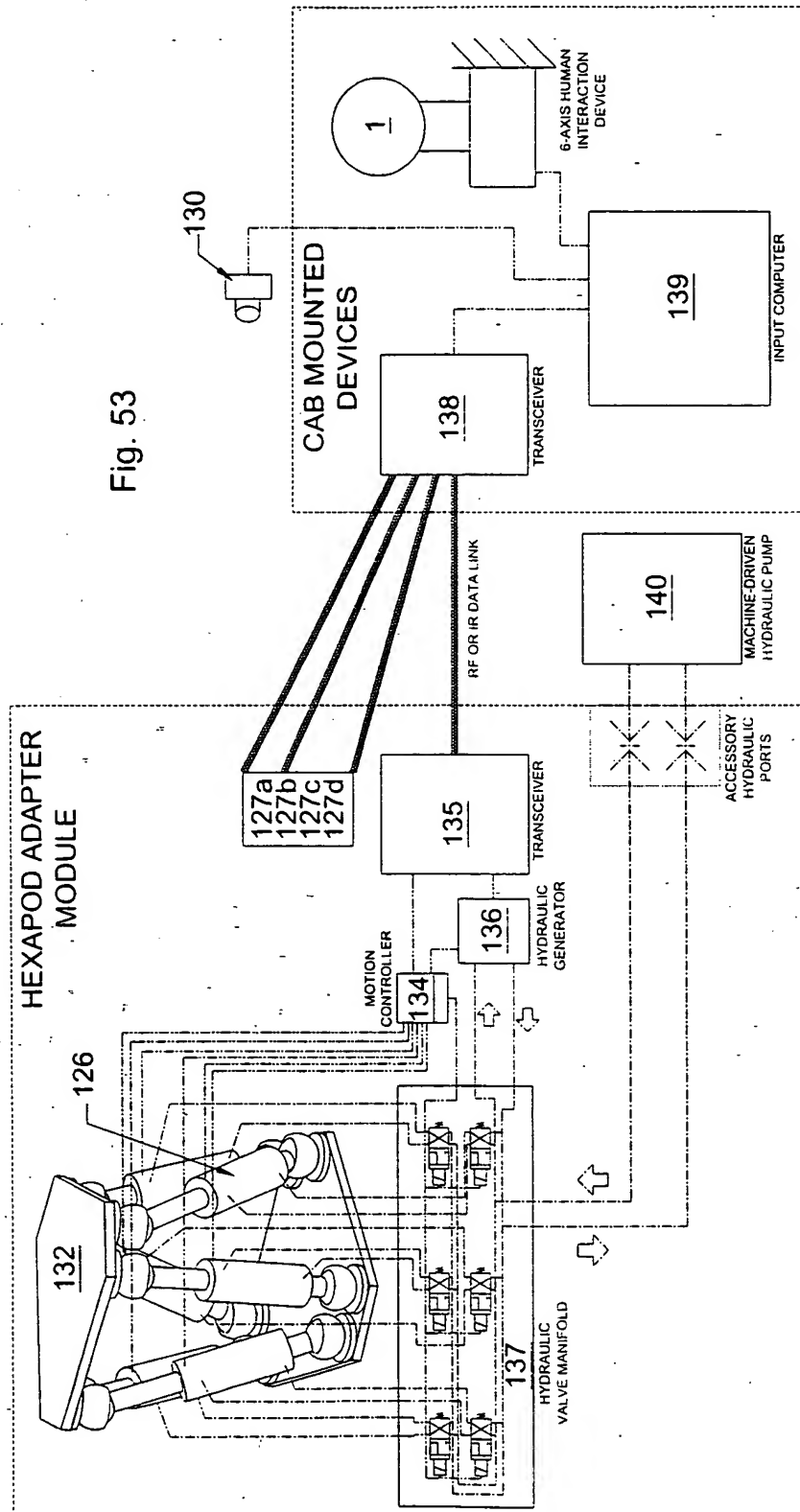


Fig. 52

Fig. 53



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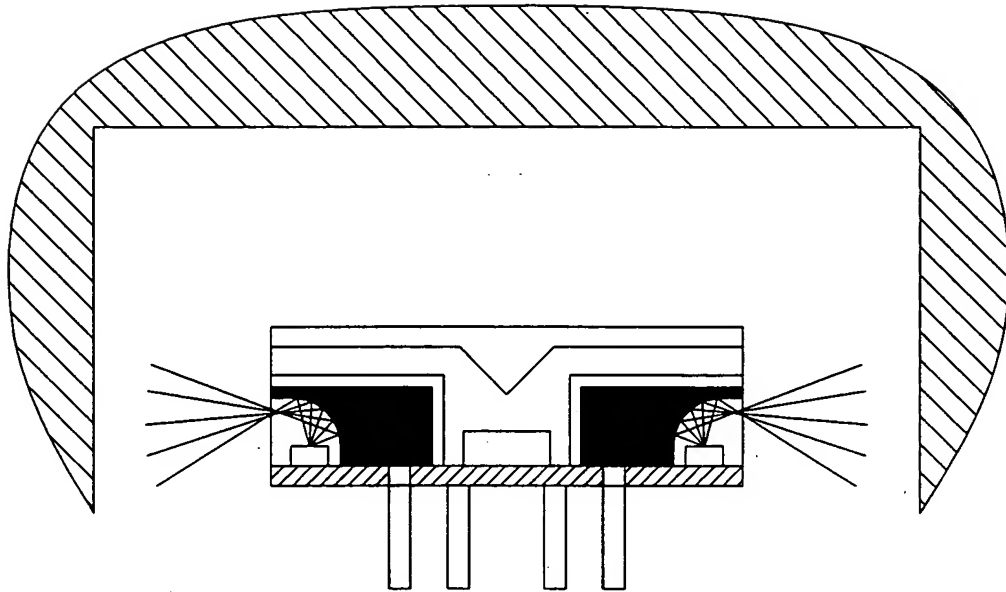


Fig. 54A

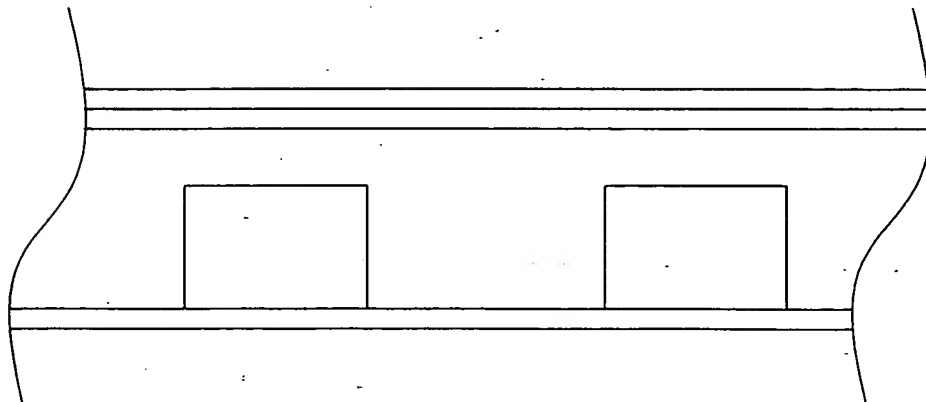


Fig. 54B

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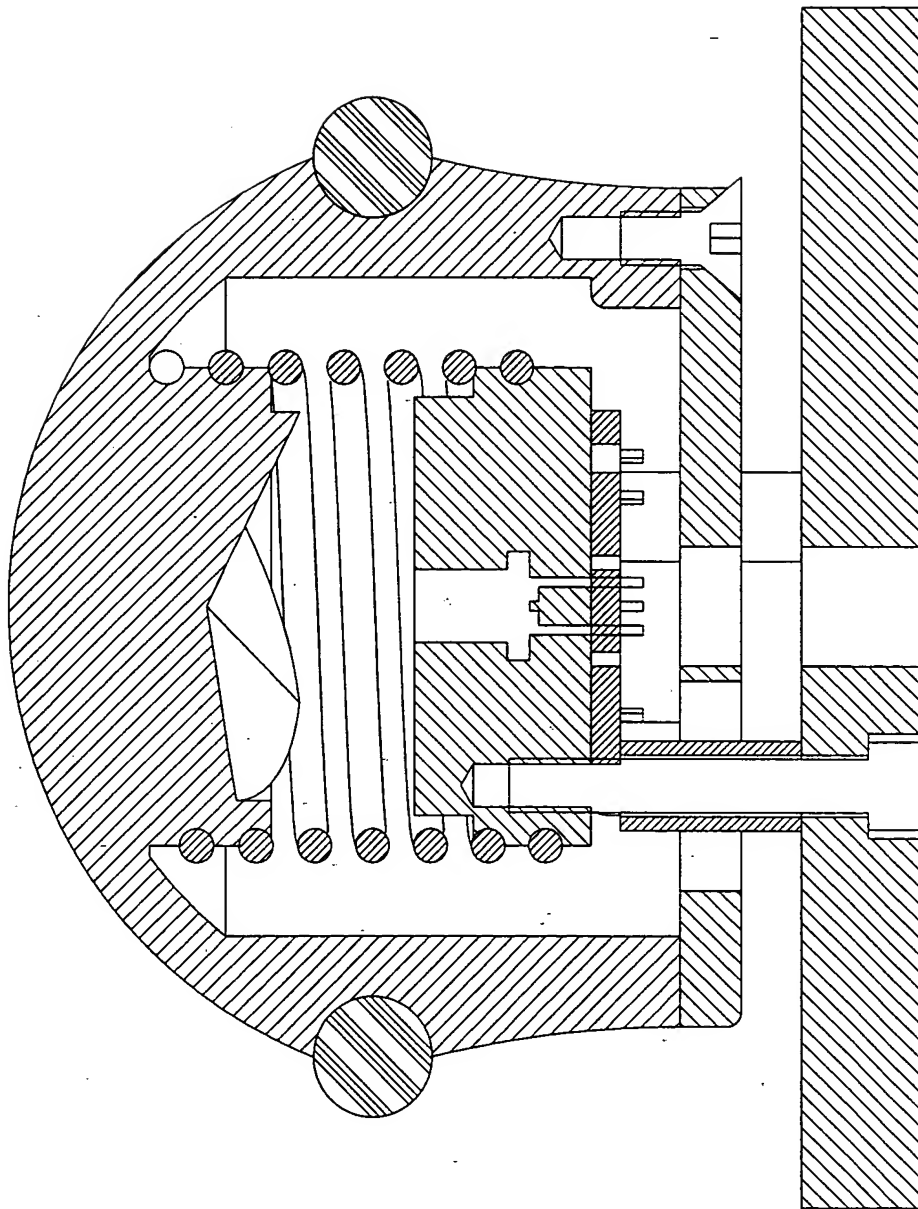


Fig. 55

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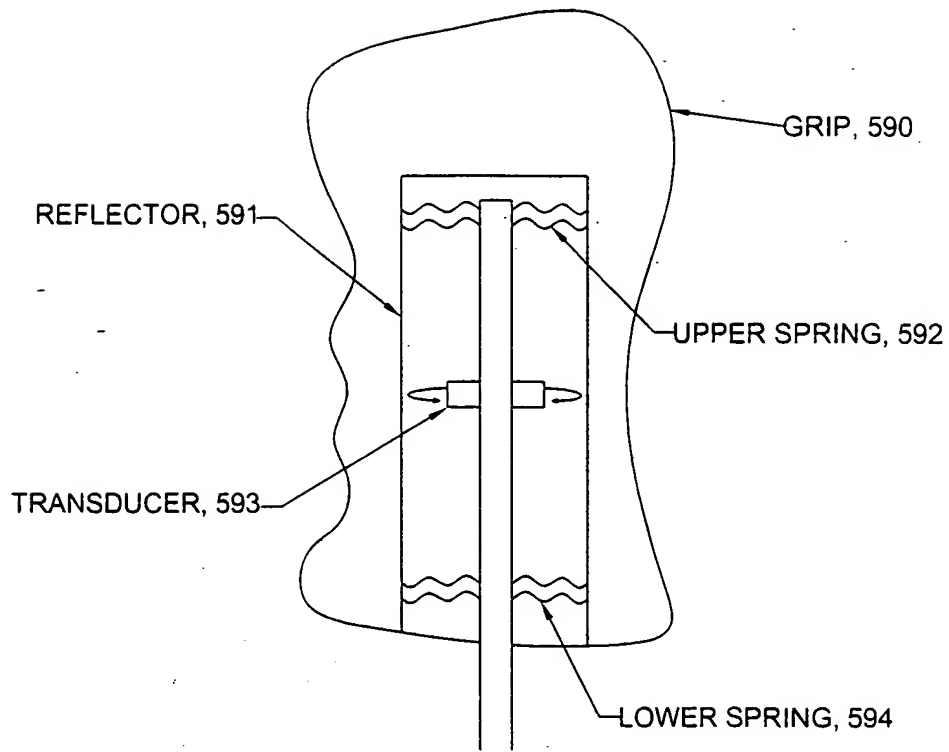


Fig. 56A

Fig. 56B

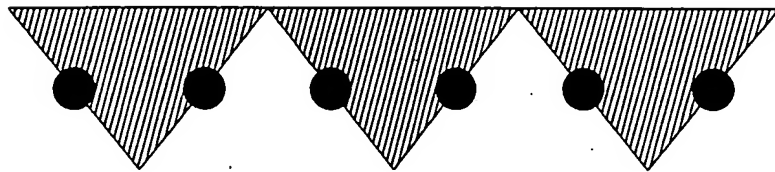
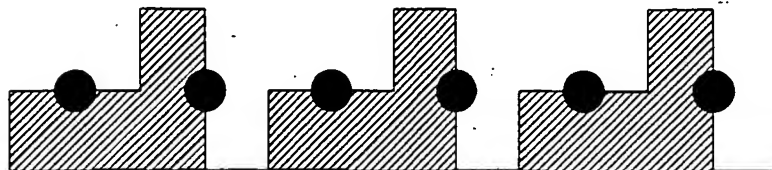


Fig. 56C



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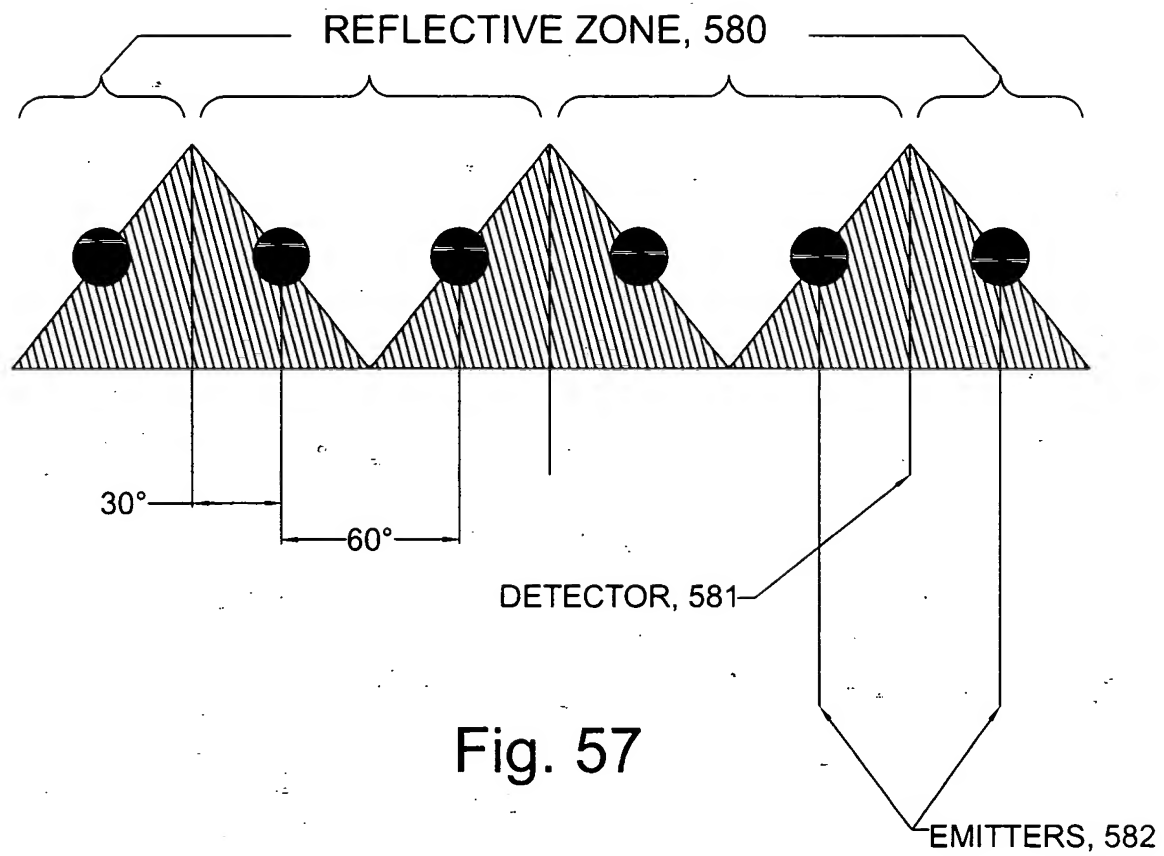


Fig. 57

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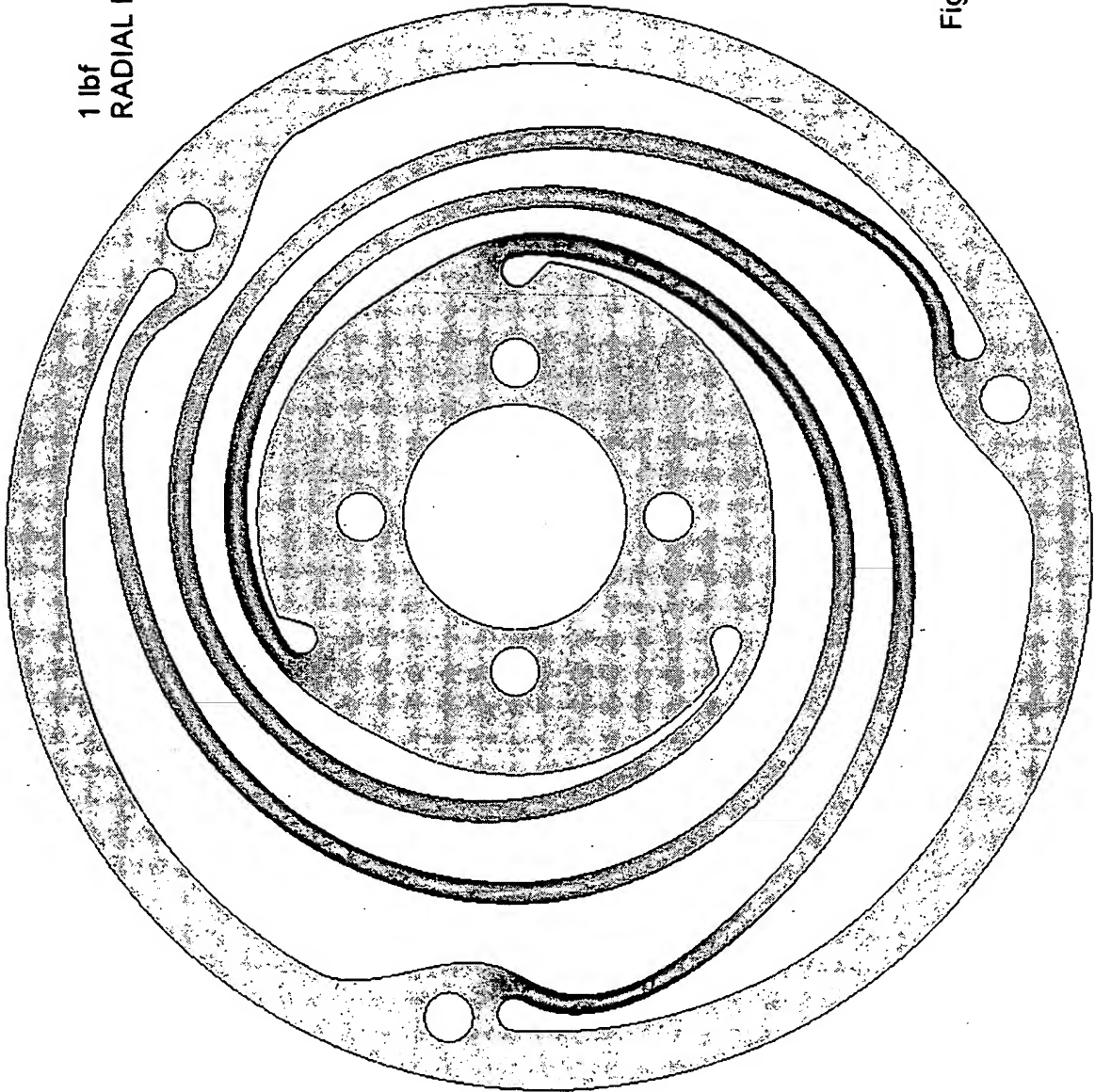
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von Mises
1.862e+004
1.707e+004
1.552e+004
1.397e+004
1.241e+004
1.086e+004
9.310e+003
7.759e+003
6.207e+003
4.655e+003
3.104e+003
1.552e+003
8.235e+002

1 lbf
RADIAL FORCE

.040 WIDE
x .062 THICK
ELEMENTS

Fig. 58



Spring-Lateral-Force Static Nodal stress
Units psi Deformation Scale 1

Spring-Up-Force Static Nodal stress
Units psi Deformation Scale 1

von Mises
2.631e+004
2.412e+004
2.193e+004
1.974e+004
1.754e+004
1.535e+004
1.316e+004
1.096e+004
8.771e+003
6.579e+003
4.386e+003
2.193e+003
1.113e+001

1 lbf
AXIAL FORCE

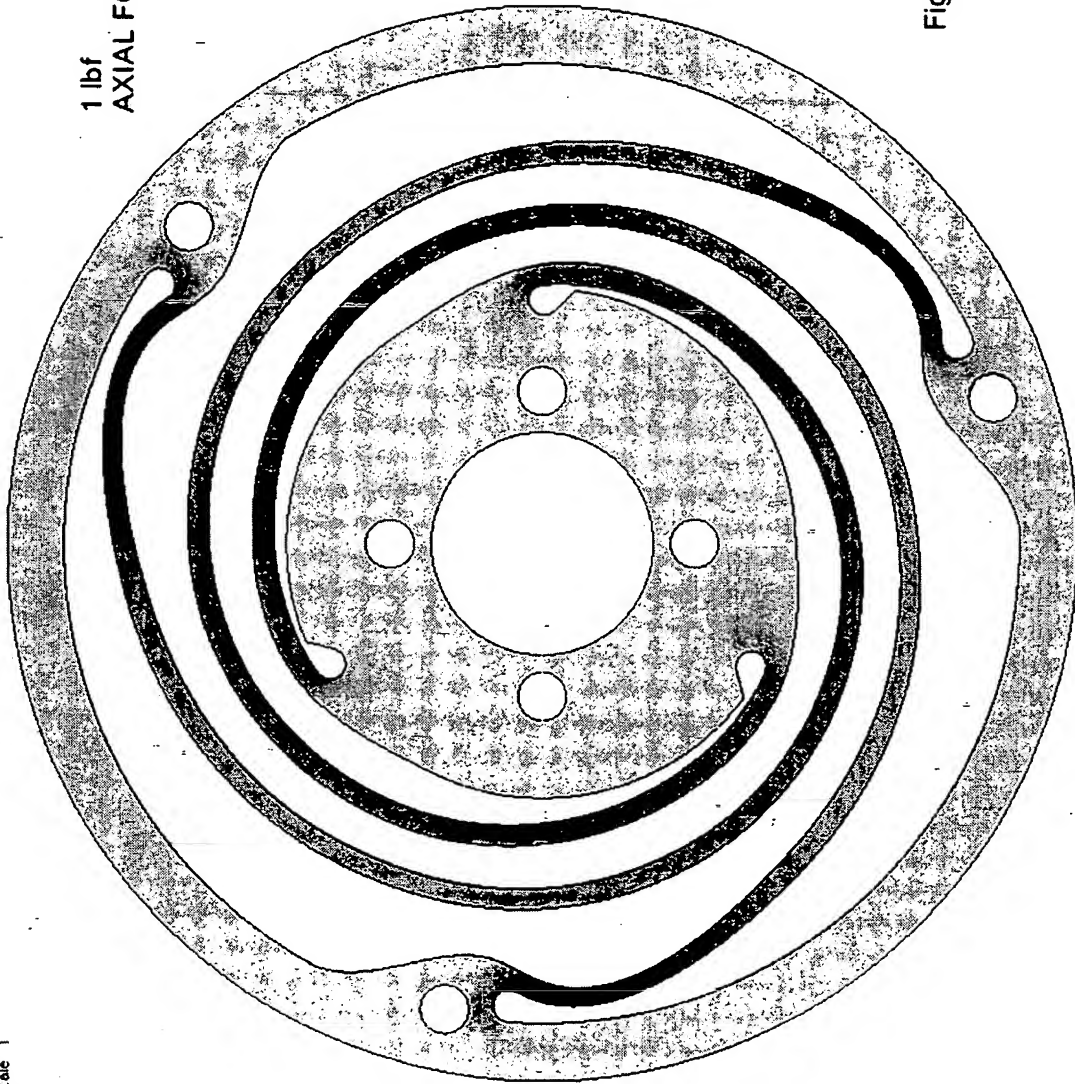


Fig. 59



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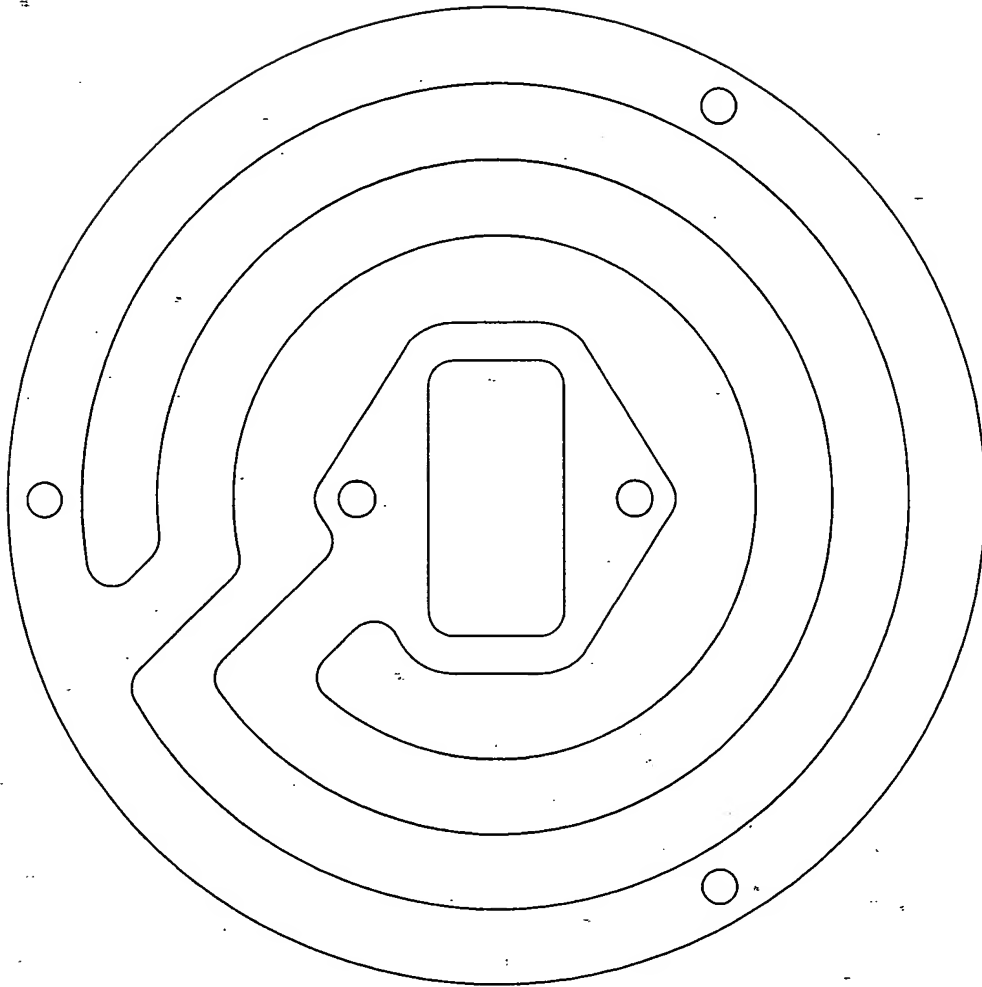
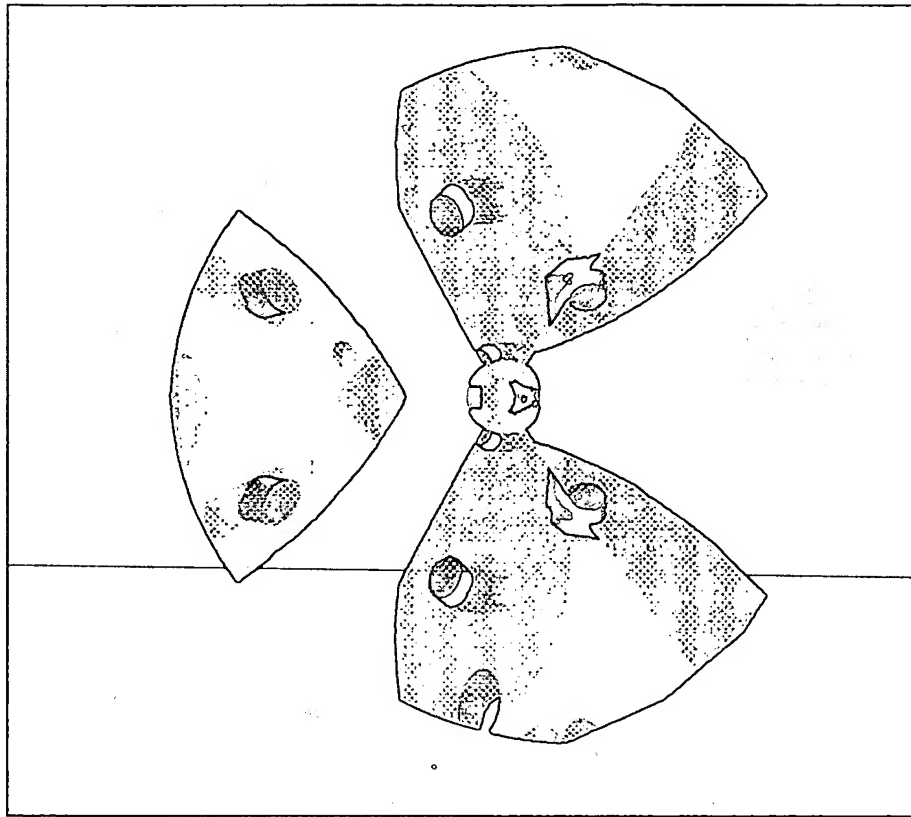
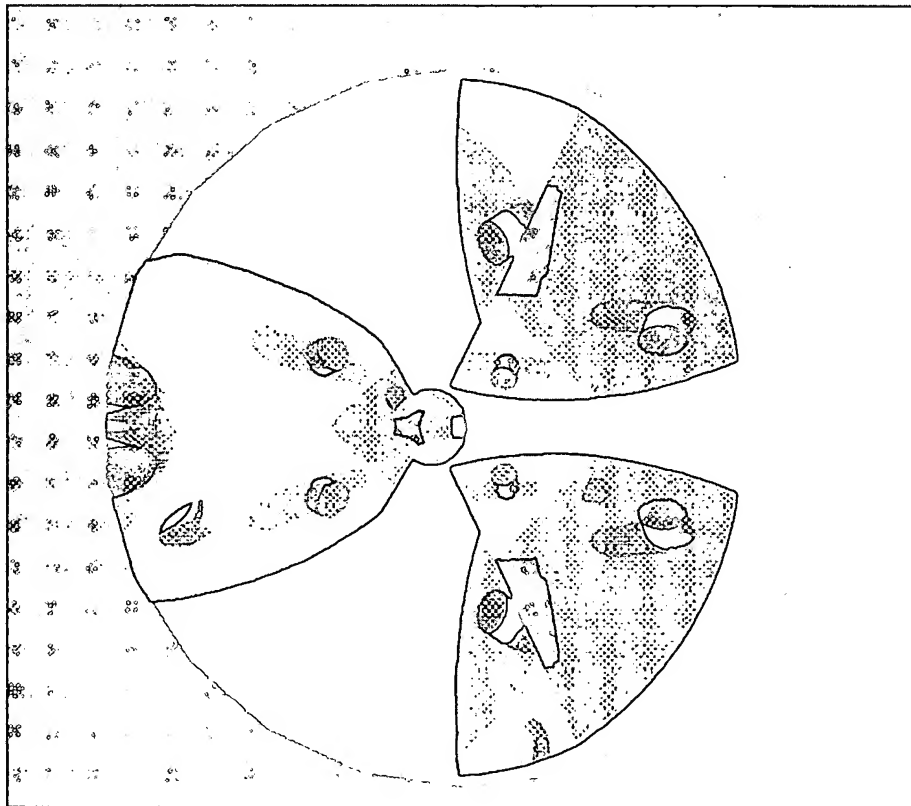


Fig. 60

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X+ Fig. 61A



X- Fig. 61B

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